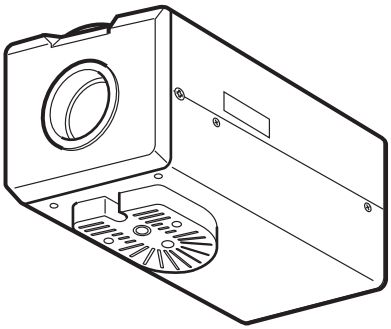
JVC

MEGAPIXEL IP CAMERA

VN-X35U

INSTRUCTIONS



Thank you for purchasing this JVC product. Before operating this unit, please read the instructions carefully to ensure the best possible performance.

LST0789-001A

Safety Precautions

Attention:
This symbol is only valid in the European Union.

Information for Users on Disposal of Old Equipment

[European Union]

This symbol indicates that the electrical and electronic equipment should not be disposed as general household waste at its end-of-life. Instead, the product should be handed over to the applicable collection point for the recycling of electrical and electronic equipment for proper treatment, recovery and recycling in accordance with your national legislation.

By disposing of this product correctly, you will help to conserve natural resources and will help prevent potential negative effects on the environment and human health which could otherwise be caused by inappropriate waste handling of this product. For more information about collection point and recycling of this product, please contact your local municipal office, your household waste disposal service or the shop where you purchased the product.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

(Business users)

If you wish to dispose of this product, please visit our web page www.jvc-europe.com to obtain information about the take-back of the product.

[Other Countries outside the European Union]

If you wish to dispose of this product, please do so in accordance with applicable national legislation or other rules in your country for the treatment of old electrical and electronic equipment.

FOR USA AND CANADA

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION:TO REDUCE THE RISK OF ELECTRIC SHOCK. DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE.REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash wish arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Information for USA

This device complies with part 15 of the FCC Rules. Changes or modifications not approved by JVC could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1)This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Due to design modifications, data given in this instruction book are subject to possible change without prior notice.

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

AVERTISSEMENT:
POUR EVITERLES RISQUES D'INCENDIE OU D'ELECTROCUTION, NE PAS EXPOSERL'APPAREIL A L'HUMIDITE OU A LA PLUIE.

INFORMATION (FOR CANADA)
RENSEIGNEMENT (POUR CANADA)

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil num rique de la Class A est conforme á la norme NMB-003 du Canada.

WARNING (FOR EUROPE):

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

- This installation should be made by a qualified service person and should conform to all local codes.
- This installation shall be in accordance with the National Electrical Code, ANSI/NFPA 70.
- The unit is to be powered by an AC 24 V power supply.
  The AC 24 V power supply should conform to the following:Class 2 only(For USA),Isolated power supply only(For Europe and other).
- Any Mention in this manual of Alarm inputs/ outputs have not been evaluated by UL to be used for Burglar Alarm Functionality.

This manual describes detailed usage of VN-X35U.
For basic usage of VN-X35U, please refer to "Read me first".
For latest information, please refer to "Readme" file in the CD-ROM.

- The supplied CD-ROM includes "Instructions (this manual)"(pdf), "API Guide"(pdf), "Search tool" and "White Spot Correction Tool".

FOR USA-California Only

This product contains a CR Coin Cell Lithium Battery which contains Perchlorate Material - special handling may apply.
See
www.dtsc.ca.gov/hazardouswaste/perchlorate

ENGLISH

Dear Customer,

This apparatus is in conformance with the valid European directives and standards regarding electromagnetic compatibility and electrical safety.

European representative of Victor Company of Japan, Limited is:
JVC Technical Services Europe GmbH
Postfach 10 05 04
61145 Friedberg
Germany

DEUTSCH

Sehr geehrter Kunde, sehr geehrte Kundin,

dieses Gerät stimmt mit den gültigen europäischen Richtlinien und Normen bezüglich elektromagnetischer Verträglichkeit und elektrischer Sicherheit überein.

Die europäische Vertretung für die Victor Company of Japan, Limited ist:
JVC Technical Services Europe GmbH
Postfach 10 05 04
61145 Friedberg
Deutschland

These are general IMPORTANT SAFEGUARDS and certain items may not apply to all appliances.

IMPORTANT SAFEGUARDS

1. Read all of these instructions.
2. Save these instructions for later use.
3. All warnings on the product and in the operating instructions should be adhered to.
4. Unplug this appliance system from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
5. Do not use attachments not recommended by the appliance manufacturer as they may cause hazards.
6. Do not use this appliance near water - for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.
7. Do not place this appliance on an unstable cart, stand, or table. The appliance may fall, causing serious injury to a child or adult, and serious damage to the appliance.
   Use only with a cart or stand recommended by the manufacturer, or sold with the appliance. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer. An appliance and cart combination should be moved with care.
   Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

   PORTABLE CART WARNING
   (symbol provided by RETAC)

   S3125A
8. Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to insure reliable operation of the appliance and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the appliance on a bed, sofa, rug, or other similar surface.
   This appliance should never be placed near or over a radiator or heat register. This appliance should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.
9. This appliance should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company. For appliance designed to operate from battery power, refer to the operating instructions.
10. For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
11. Do not allow anything to rest on the power cord. Do not locate this appliance where the cord will be abused by persons walking on it.
12. Follow all warnings and instructions marked on the appliance.
13. Do not overload wall outlets and extension cords as this can result in fire or electric shock.
14. Never push objects of any kind into this appliance through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the appliance.
15. Do not attempt to service this appliance yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
16. Unplug this appliance from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    a. When the power cord or plug is damaged or frayed.
    b. If liquid has been spilled into the appliance.
    c. If the appliance has been exposed to rain or water.
    d. If the appliance does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the appliance to normal operation.
    e. If the appliance has been dropped or the cabinet has been damaged.
    f. When the appliance exhibits a distinct change in performance - this indicates a need for service.
17. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
18. Upon completion of any service or repairs to this appliance, ask the service technician to perform routine safety checks to determine that the appliance is in safe operating condition.

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Main Features

High Picture Quality
The camera unit of this product employs a 1,250,000-pixel CCD (1/3") which enables high quality video surveillance.

Support for Dual Stream
Simultaneous distribution of JPEG and MPEG4 images is possible.

Realization of High Frame Rate
Data transmission is possible in Quad-VGA size at a rate of 15 fps.

Support for Multicast
This product supports multicast, which enables transmission of image data to multiple computers on the network without lowering the frame rate.

Built-in Web Server
You can configure the picture quality and communication settings using the Internet Explorer.

HTTP-based API
This product comes with HTTP-based API. This feature enables you to perform setting and control via the network.

Electronic Sense Up
You can shoot images during surveillance at a dark place by lengthening the exposure time to enhance the camera's sensitivity level.

Night Surveillance
This product comes with a low luminance surveillance feature, which switches automatically to the high sensitivity mode (black-and-white) when the light intensity level is low, such as at night. (Easy Day/Night Mode)

Digital PTZ Feature
Using the digital PTZ (Pan/Tilt/Zoom) feature enables you to perform surveillance over a wide angle using a smaller bandwidth.

Privacy Mask Feature
You can configure the privacy mask setting to hide specific area in shooting area.

Motion Detection
This feature enables output of an alarm upon detection of motion in the video image within preset area.
Pre-/Post-recorded image files may be sent via FTP using the alarm input.

Support for PoE (Power over Ethernet)
This product supports PoE (IEEE802.3af) and enables power supply from a LAN cable.

Analog Monitor Signal Output (For Installation)
This product comes with an analog video monitor signal output terminal for adjusting the camera angle during installation.

Compatibility with Conventional Peripheral Devices
This product comes in the same shape as conventional CCTV security cameras, and therefore can be used with other peripheral devices for security cameras such as housings.

Audio In/Out Terminal
Audio sound can be transmitted to a computer by connecting an external microphone. You can also input audio sound on the computer and output it from the audio in/out terminal of the camera through the network.

Built-in Integrated Viewer Software
This product comes with a built-in integrated viewer that enables you to monitor camera images (JPEG or MPEG4) on the computer. This software allows you to adjust the camera settings, control the camera, and monitor the audio sound. It also employs a new GUI for greater user-friendliness.

How to use this manual

■ Symbols used

Caution : Describes precautions concerning the operation of this product.

Note : Describes reference information, such as functions and usage restrictions of this product.

☞ : Indicates the reference page numbers and reference items.

■ Content of this manual

- All rights reserved by JVC. Unauthorized duplication or reprinting of this manual, in whole or in part, is strictly prohibited.

- Windows is a registered trademark of Microsoft Corporation in the U.S.
- All other product names used in this manual are trademarks or registered trademarks of their respective companies. Marks such as ™, ® and © have been omitted in this manual.
- Illustrated designs, specifications and other contents of this manual are subject to changes for improvement without prior notice.

Operating Environment

■ Recommended Computer Specifications

OS : Windows XP (Professional or Home Edition) (SP2)

: Windows Vista Business(SP1)

CPU : Pentium4 2GHz or higher

Memory capacity : 1 GB or more

Free hard disk space

: 512 MB or more

Display and video card

: 1600× 1200 pixels or larger, True Color (24 bits or 32 bits) VRAM 8 MB or more (256 MB and above recommended)

Sound card : Sound Blaster (PCI recommended)

Web browser : Internet Explorer
XP: Version 6.0
Vista: Version 7.0

■ LAN Environment

- 10BASE-T/100BASE-TX network interconnected using devices such as an IEEE802.3-compliant switching hub.
- IEEE802.3af-compliant switching hub when PoE is in use.
- IGMPv2-compliant network when multicast is in use.

Memo:

- The above PC specifications are guides for smooth use of the applications, and not a guarantee of their operation.
- Depending on the condition of use, applications may not run smoothly even when the user's computer meets the specification requirements.
- Using a computer for which its performance does not meet the requirements may cause;
  - The JPEG playback frame rate to deteriorate.
  - Delay in the MPEG4 playback images and may result in interruption in playback.
  - Sound might not be played back properly.
- To make use of Built-in MPEG4 Viewer of VN-X35U, install "ffdshow" that is open source codec. You can download "ffdshow" from the Internet.
- AD/DA clock varies significantly depending on the sound card built in the PC. Using such card may cause overflow or underflow of audio data and noise may occur in the playback sound.

Cautionary Notes

Maintenance and location of use

- This product is intended for use indoors. Make sure that you use a housing etc., when using it outdoors.
- Do not place this product in the following environments.

  Otherwise, it may malfunction or break down.
  - Hot or cold locations beyond the surrounding temperature range of -10°C to 50°C.
  - Locations beyond the allowable operating humidity range of 20 % RH to 85 % RH. (condensation is not allowed)
  - Near equipment that emits strong magnetic fields, such as transformers or motors.
  - Near equipment that emits radio waves, such as transceivers and mobile phones.
  - Locations with excessive dust or sand.
  - Locations that are subject to vibration.
  - Locations prone to moisture such as window side.
  - Locations subject to steam or oil, such as kitchens.
  - Locations that emit radiation, X-rays or corrosive gases.
- Use of this product or cables connected to this product at locations where strong electric waves and magnetic fields are emitted (e.g., near radio, TV, transformer, monitor, etc.) may cause noise interferences in the images or changes in the color.
- Do not install this product at locations that may trap heat.

  This product also discharges heat from the surface of the camera unit. As such, do not install it at locations that may trap heat, such as near walls.

Handling Precautions

- Do not hang on this product, shake it, or hand objects over it. Applying an excessive load may cause the product to fall off and result in accidents.
- Do not stack up the equipment.

  Heat or noise of an equipment may cause malfunction or failure of the other, and result in fire.
- Do not block vents around the equipment.

  Inadequate heat ventilation may result in malfunction of this product. Be sure not to block vents around the product.

Saving Energy

- When this product is not in use for a long period of time, turn off the power of the system to ensure safety and reduce power consumption.

Maintenance

- Be sure to turn off the power before performing maintenance.
- Wipe this product using a soft cloth.

  Wiping with thinner or benzene may melt or tarnish its surface. For dirt that cannot be easily removed, wipe using a neutral detergent diluted with water, followed by wiping with a dry cloth.

Copyright Protection

- With the exception of the user being the copyright holder or when permission such as for duplication has been granted by the copyright holder, permission is required in principle for the duplication, modification, or transmission of copyrighted video and audio data.
  Unauthorized duplication, modification, or transmission of copyrighted material may constitute a copyright infringement, and the user may be liable to compensate for any damages. When using copyrighted video/audio data, be sure to check the license agreement of the copyrighted material thoroughly.
  When rights or rights holders are involved with regard to the targeted duplicating subject, permission may be required for shooting or using (processing) it. Be sure to check the licensing conditions thoroughly.

Exemption of Liability

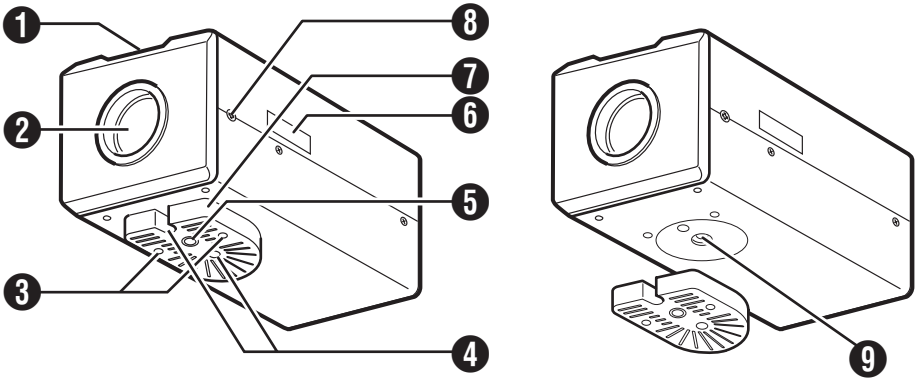
- The motion detection feature is not a feature to prevent theft or fire. JVC shall not be liable for any damage that occurs.
- JVC shall not be liable for any damage due to the invasion of privacy by images of this camera.

Others

- The cable stopper of the alarm terminal may come off in some cases. When mounting the cables, make sure to do so carefully.
- If a high luminance object (such as a lamp) is shot, a white smear may appear at the upper and lower ends of this object on the screen. This phenomenon (smear) is characteristic of solid-state image sensors, and is not a malfunction.
- Some hubs/switches of products that are equipped with intelligent features may include a broadcast/multicast suppression function. Viewing of multicast images on this product may fail if this function is enabled.
- Electricity can be supplied to this product either by connecting the AC 24 V power supply or using the PoE. Make sure to select only one mode of electrical supply. Connecting the power cord and the LAN cable for the PoE at the same time may result in failure or malfunction of the camera. (☞ Page 17,18)
- This product comes with a built-in AGC circuit. When using this product with AGC set to "Mid", "High" or "Super", the sensitivity level increases when the image is dark, and the screen may appear grainy as a result. However, this is not a malfunction.
- When using this product with the white balance set to "ATW", the displayed color may differ slightly from the actual color according to the condition of the object due to the principle of the automatic tracking white balance circuit. This is not a malfunction.
- The electronic shutter of this product is set to "Auto(1/15 - 1/100)" by default. For regions with a commercial power supply frequency of 50 Hz, switch to the flickerless mode during use under fluorescent lights (excluding inverter lighting equipment) to prevent flickers.
- When the Easy Day/Night feature is enabled, the image turns black-and-white in a dark location. As the sensitivity level is increased in this case, the screen may appear grainy and more white spots may appear. When switching between color and black-and-white images, the brighter area on the screen is emphasized, which may reduce the visibility. However, this is not a malfunction.
- If the power supply voltage is momentarily cut off or reduced due to lightning, turning on of the air conditioner's power, etc., the image may be disrupted or noise interference may occur.
- When using multicast, make use of a IGMPv2-compliant network switch.
- When using Built-in Viewer, the video images and audio sound may not be in-sync in some cases. This is not a malfunction.

Name and Function of Parts

Front / Bottom / Side



❶ Back Focus Adjustment Ring

This ring is used for adjusting the back focus.

To operate, loosen the ❽ back focus fastening screw by turning it in the anti-clockwise direction, and turn the screw in the clockwise direction to fasten after operation is complete.

This product is pre-adjusted to a position that is best suited for CS mount.

(☞ Page 23)

❷ Lens Mount

This is a mount for mounting the lens.

The mount is compatible with CS mount lens.

(☞ Page 16)

❸ Camera Mounting Bracket Fastening Screw (2 pcs: M2.6 x 6 mm)

Use screws with a length of 6 mm. Screws beyond the specified length must not be used as doing so may damage the interior.

❹ Anti-rotation Hole

Use this anti-rotation hole to mount the camera firmly.

❺ Camera Mounting Screw Holes(1/4-20UNC)

Use this hole when mounting this product to a fixer or rotating platform.

Use screws with a length between 5 mm to 7 mm. Screws beyond the specified length may damage the interior, while those shorter than specified may cause the camera to fall off, and therefore these must not be used.(☞ Page 21)

❻ [MAC address]Indicator

The MAC address is a unique physical address of the product. This address cannot be altered.

❼ Camera Mounting Bracket

This bracket is pre-mounted to the bottom surface of the camera. It can also be mounted to the top surface according to the usage. Mount it to the screw holes at the top surface using the ❸ camera mounting bracket fastening screws.

(☞ Page 21)

❽ [BF LOCK] Back Focus Fastening Screw

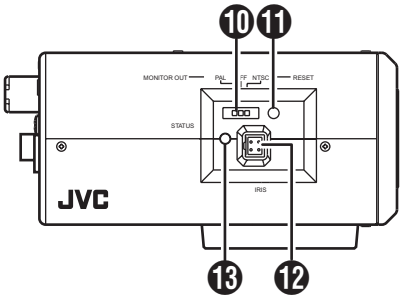
This is the fastening screw for the back focus adjustment unit. (☞ Page 23)

❾ Inner Tripod Base Screw Hole (1/4-20UNC)

Use this hole when mounting this product to a miniature housing.

You can mount to the housing through this hole directly without using the ❼ camera mounting bracket. (☞ Page 22)

Side



⑩ [MONITOR OUT] Monitor Output Selection Switch

Use this switch to select the availability of output from the ⑭ [MONITOR OUT] terminal as well as the signal system.(☞ Page 12)

NTSC : Outputs NTSC signals.
OFF : No output. Select this value when distributing images to the network.
PAL : Outputs PAL signals.
[Default setting: OFF]

Note:

- Images are not distributed to the network when "NTSC" or "PAL" is selected.
- When the switch is changed, press the ⑪ [RESET] button for less than 2 seconds to restart.

⑪ [RESET] Reset Button

This button functions in two different ways depending on how it is pressed.

- Reset function
  Press and release the button for less than two seconds to restart "VN-X35U" It takes about one minute for the unit to restart, and the [RESET]button is disabled during this interval.
- Focus Assist function
  Press and hold down for at least two seconds but less than five seconds.
  The ⑫ [STATUS] indicator starts blinking in green color and orange color repeatedly, and the Focus Assist mode is enabled.
  (☞ Page 24)
  You can also perform the same operation on the viewer.(☞ Page 93)

Memo:

Pressing and holding the button for five seconds or longer enables the service confirmation mode. The ⑫ [STATUS] indicator lights up in orange color in this mode. Do not press the button for 5 seconds or longer.

⑫ [IRIS] Iris Terminal

Use this terminal to connect the DC iris lens. (Connection with the video iris lens is not possible.)
(☞ Page 16)

⑬ [STATUS] Status Indicator

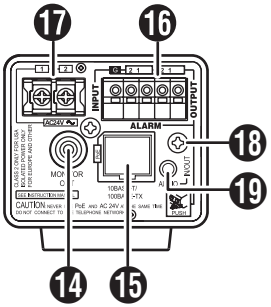
This status of this product is indicated in green or orange color.
Starting up: Lights up in orange
Startup complete: Lights up in green
Error: Blinks in orange

Memo:

- The indicator alternates lighting up in green color and orange color repeatedly when in the Focus Assist mode. (☞ Page 24)
- Blinks in green color after reboot when "Identify Unit" is set to "Blink" (☞ Page 75).
- You can turn off the indicator after startup is complete using the [LED State] of Built-in Viewer. (☞ Page 75)

Name and Function of Parts (continued)

Rear



⑭ [MONITOR OUT] Monitor Video Signal Output Terminal (RCA)

This is an output terminal for composite video signals (1 V (p-p), output impedance of 75 Ω).
Use this terminal to connect to devices such as a video monitor.
This terminal is used for adjusting the camera angle during installation. (☞ Page 19)

Memo:

- Use the ⑩ [MONITOR OUT]switch to select the availability of output as well as the signal system. When the switch is toggled, press the ⑪ Reset button for less than two seconds to reboot the unit.
- When using the [MONITOR OUT] output, set the privacy mask to "Off". (☞ Page 61)

⑮ [10BASE-T/100BASE-TX]

Use this terminal to connect to the network via a LAN cable.
This product supports PoE (IEEE802.3af) and therefore can be used without a power cable.
PoE: class 0
(☞ Page 17,18)

⑯ [ALARM INPUT/OUTPUT] Alarm Input/ Output Terminals

Use these terminals to connect to an external alarm device.
(☞ Page 20)

⑰ [AC24V] Power Input Terminal

Use this terminal to connect to an AC 24 V, 50/60 Hz power supply.
(☞ Page 17)

⑱ Fall Prevention Wire Mounting Screw (M3 x 6 mm)

Use this screw to mount the fall prevention wire.
(☞ Page 21)

⑲ [AUDIO IN/OUT] Audio Signal Input/ Output Terminal(Mini jack, ø3.5, stereo)

This is an audio input/out terminal. Connect using a mini jack ø3.5 stereo cable.
(☞ Page 19)

Features

Surveillance Using Built-in Viewer

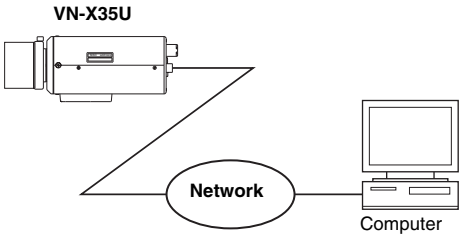
VN-X35U comes with Built-in JPEG/MPEG4 Viewer and Audio Monitor.

JPEG images and MPEG4 images of VN-X35U can be monitored using Built-in Viewer on the PC.

JPEG images that are currently displayed can also be captured in the computer's hard disk.

Inputted audio to VN-X35U can be monitored using Built-in Viewer on the PC.

"Operation of Built-in Viewer" (☞ Page 86)



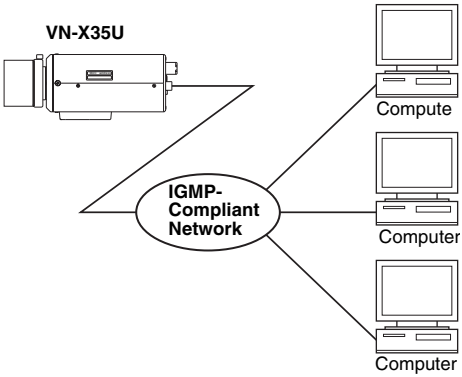
VN-X35U accepts requests from 20 clients at maximum.

Monitoring via Multicast

Multicast enables monitoring of JPEG and MPEG4 images on multiple computers.

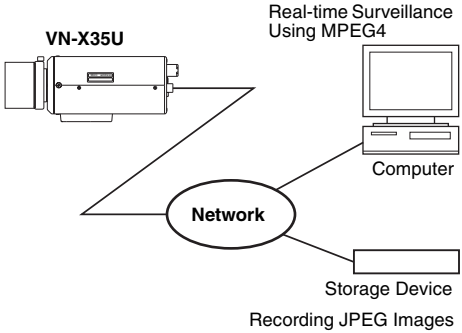
You can check the audio sound of the external microphone that is connected to the audio in/out terminal on the computer.

"Streaming Page" (☞ Page 68)
"Image quality setting" (☞ Page 92)



Surveillance via Dual Stream

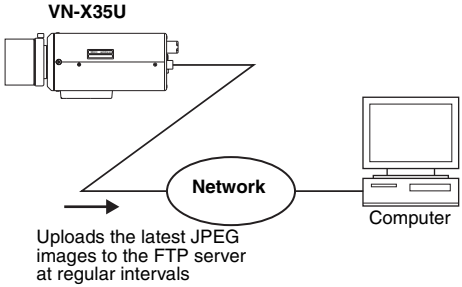
Simultaneous distribution of JPEG and MPEG4 images enables real-time surveillance using MPEG4 (30 fps) and recording of JPEG images at the same time. You can also lengthen the recording time by lowering the frame rate, resolution, and picture quality settings for JPEG images.



Saving JPEG images to the FTP server at regular intervals

JPEG images may be uploaded to the FTP server at regular intervals.

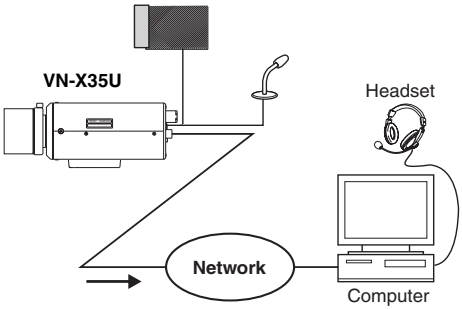
"FTP" (☞ Page 55)



Features (continued)

Input audio to computer / output audio from computer

Connect the mini jack ø3.5 stereo cable to the [AUDIO IN/OUT] terminal. Connect an external microphone to the R ch of the mini jack ø3.5 stereo cable. You can now monitor audio sound that has been picked up such as on a computer.
Connect the built-in amplifier speakers to the Lch to output audio sound input to the computer.

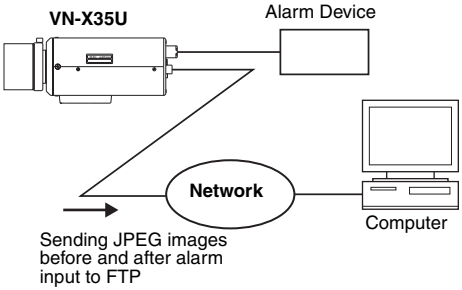


Memo:

- Use of a headset for audio input/output of the computer is recommended to prevent howling.

Alarm

VN-X35U comes with a motion detection feature and dual alarm input.
By motion detection or alarm input, actions such as mail delivery, message transmission via TCP/UDP, alarm output can be triggered. These actions can also be triggered by combination of two alarm inputs.
Installing an FTP server enables uploading of JPEG images before and after the alarm input time (pre-/post-recording) to the server.
"Alarm Page" (☞ Page 50)
"Image quality setting" (☞ Page 92)



Restrictions on Clients

VN-X35U enables users to authorize or reject the acquisition of images by specific IP address.
(☞ Page 70)

Control via customized application software

The following uses are also possible by developing a customized application software that supports the API of VN-X35U.
For details, please refer to "API Guide" in the supplied CD-ROM.

- Monitors via the computer while at the same time records images to the HDD of the computer.
- Performs recording by changing the frame size/frame rate during alarm occurrence.
- Records the type and time of alarm occurrence on the computer.

Digital PTZ (Pan/ Tilt/ Zoom)

You can clip and transmit any area in QuadVGA (1280x960 pixels).
(☞ Page 46)

Setup Procedures

Step 1 Connection/Installation (☞ Page 16)

Connect the lens mount, power supply cord, LAN cable and alarm cable.
Next, mount the camera to the ceiling. Make sure to attach the fall prevention wire firmly to the camera. After the camera is mounted, connect the video monitor to the [MONITOR OUT] terminal at the rear of the unit, followed by adjusting the camera angle.
You can select the video signals of the [MONITOR OUT] terminal using the [MONITOR OUT] switch. (“NTSC”or “PAL”)
“Back Focus Adjustment” (☞ Page 23)
“[MONITOR OUT] Monitor Output Selection Switch” (☞ Page 11)

※ After adjusting the camera angle using the [MONITOR OUT] terminal, set the [MONITOR OUT] switch to “OFF”. Images are not distributed to the network when “NTSC” or “PAL” is selected. After changing the [MONITOR OUT] switch setting, press the Reset button to reboot the camera.

▽

Step 2 Network settings (☞ Page 27)

Configure the network settings of the computer and this camera.

※ In a system where multiple units of VN-X35U are used, turn on the power of only one unit to configure the IP address settings using the Internet Explorer. Upon doing so, turn on the power of the second unit and configure accordingly. Configure the settings for the other cameras using the same procedure.

▽

Step 3 Setting Using Internet Explorer (☞ Page 33)

Configure the picture quality and alarm settings using the Internet Explorer.

▽

Step 4 Operating Built-in Viewer (☞ Page 86)

Built-in Viewer enables you to monitor JPEG or MPEG4 images, send/receive audio data, perform PTZ operations, and register preset positions.

Mounting the Lens

Note:

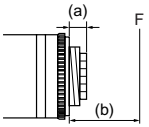
- Make use of a megapixel lens.

1. Check the mounting method of the lens to be used before mounting

- The mount method used for VN-X35U is CS mount.
- Make use of the values listed in the table below for the dimensions of the lens mount (a) indicated in the following diagram.

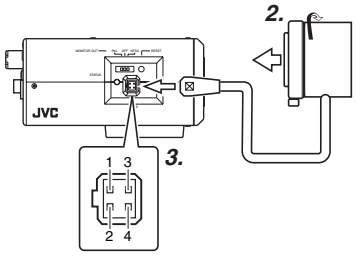
Lens	Flange Focus (b)	Dimension (a)
CS Mount Lens	12.5 mm	5.5 mm and below

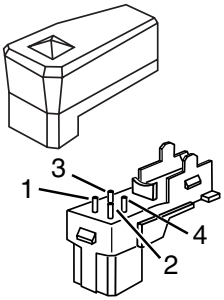
- Objects longer than the dimension (a) must not be used as doing so may damage the camera interior or prevent the lens from being properly mounted, hence resulting in malfunctions.



2. Turn the lens in the clockwise direction to mount it to the camera firmly

3. When using a DC iris lens, pay attention to the pin position before connecting the lens cable





Pin No.	DC Iris Lens (Without Built-in EE Amplifier)
1	Damping (-)
2	Damping (+)
3	Driving (+)
4	Driving (-)

Memo:

- Use a 4 Pin Plug to connect when the plug of lens cable is different.
  (Product number of 4 Pin Plug : CV2859-001)
  For inquiries on the 4 Pin Plug, refer to the authorized dealer.

Power Connection

Electricity can be supplied to this product either by connecting to the AC 24 V power supply or using the PoE (☞ Page 18).

- When power is supplied to this product, the [STATUS] indicator at the side lights up. The indicator lights up in orange color during startup, and switches to green color after startup is complete.

Memo:

- You can select not to light up the [STATUS] indicator when the unit is running. (☞ Page 75)

Note:

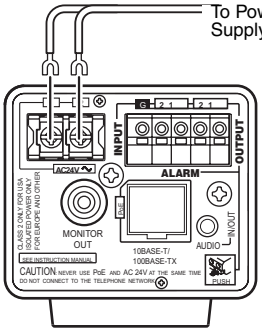
- Make sure to select only one mode of electrical supply. Connecting the power cord and the LAN cable for the PoE at the same time may result in failure or malfunction of the camera.
- Be sure to use an AC 24 V supply that is isolated from the primary power supply circuit. Using a variable voltage power supply will cause the camera and system to malfunction or breakdown.

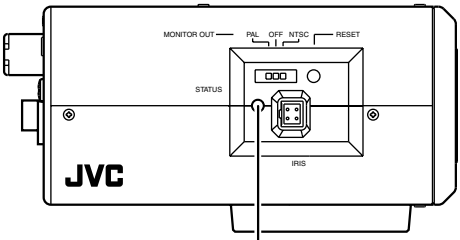
Connecting to the AC 24 V power supply

Connect this product to the AC 24 V power supply when the PoE is not used.

Note:

- Make sure to select only one mode of electrical supply. Connecting the power cord and the LAN cable for the PoE at the same time may result in failure or malfunction of the camera.
- The unit is to be powered by an AC 24 V power supply.
  The AC 24 V power supply should conform to the following: Class 2 only (For USA), Isolated power supply only (For Europe and others).





[STATUS] Indicator

- **Power cord**
  - To prevent misconnection and detachment of cords, use a lug plate to connect the cord to the terminal.
  - When a two-core VVF (vinyl insulated vinyl sheath cable) is used, the connection distance is as follows.

Conductor Diameter (AWG No.)	ø1.0 mm (18) and above	ø1.6 mm (14) and above	ø2.0 mm (12) and above
Maximum Extension	140 m	360 m	570 m

Warning

The rated power of this product is AC 24 V, 50 Hz/60 Hz. Make sure to use it with the correct voltage.

Use an AC 24 V supply that is isolated from the primary power supply.

Supplying a power beyond the rated value may result in failures, smoke or fire. When the camera breaks down, turn off the power and contact our service center immediately.

When a power beyond the rated value is supplied, the internal components may be damaged even if no abnormality is found on the appearance and operation of the camera. Please contact our service center immediately for servicing (charged separately).

Memo:

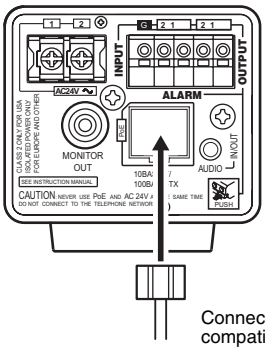
- After DHCP timeout, all IP addresses of VN-X35U are set to 192.168.0.2 by default. When the power of multiple cameras within the same LAN environment are turned on at the same time, the IP address of the cameras overlap, thus preventing proper access. As such, make sure to turn on the power of the cameras one by one.

Power Connection (continued)

- In a system where multiple units of VN-X35U are used, turn on the power of only one unit to configure the IP address settings using the Internet Explorer. Upon doing so, turn on the power of the second unit and configure accordingly. Configure the camera settings using the same procedure.
- When there is an overlap of IP address, access to VN-X35U may fail. When this occurs, turn on the power of only one VN-X35U unit within the same LAN environment and wait for a while (at least 10 minutes). Alternatively, turn off the power of all network devices connected to the same LAN environment, followed by turning them on again.

Using the PoE

Connect to a device that supports PoE to supply electricity from the LAN cable.



Connect to PoE-compatible device

Memo:

- For details on the connection method and cable type, please refer to "LAN Cable Connection" (☞ Page 18).

What is PoE (Power over Ethernet)?

This is a function that enables operation of a LAN equipment without a power cable by supplying power simultaneously with the data using a LAN cable.

LAN Cable Connection

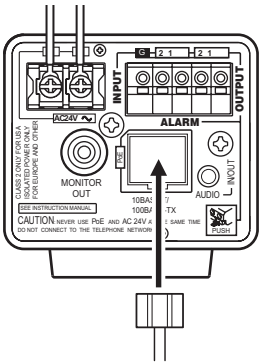
Connect the camera to a hub or computer using a LAN cable.

Cable to use

- Shielded cable
- Length of 100 m or shorter

■ **When connecting to a hub**
Make use of a straight cable.

■ **When connecting to a computer**
Make use of a cross cable.



Note:

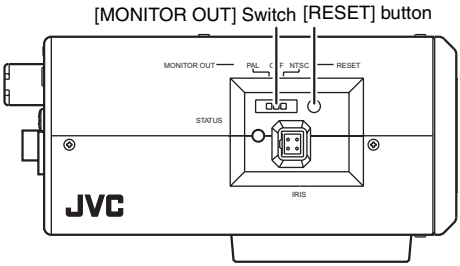
- However, cross cables cannot be used with some computer models. When connecting VN-X35U directly to a computer, check the computer's LAN specifications in advance.

Memo:

- Make use of a Category 5 (or higher) cable when 100BASE-TX is used.
- To distribute images to the network.

① set the [MONITOR OUT]switch at the side of this product to "OFF".

② Press the [RESET] button for less than 2 seconds to restart.

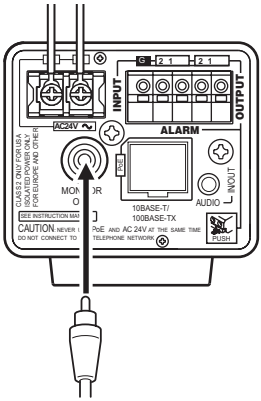


Monitor Signal Output Terminal Connection

Make use of this terminal for camera angle adjustment during installation or focus adjustment in the Focus Assist mode. Connect it to devices such as a video monitor using a video cable (RCA).

Memo:

- It is convenient to adjust focus using focus assist mode. (☞ Page 24)



Note:

- A longer cable extension distance causes signals to be attenuated, image resolution to deteriorate and noise to increase.

Memo:

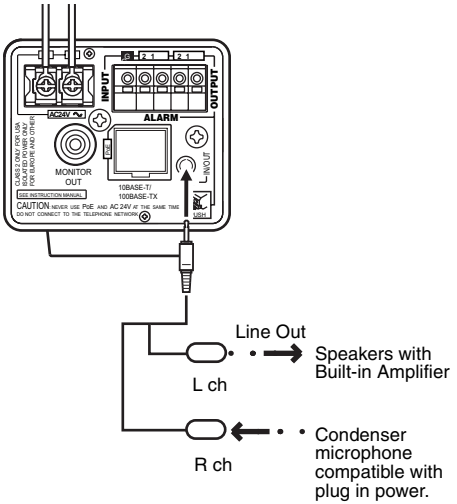
- Select the signal system for the monitor output using the[MONITOR OUT]switch at the side of this product. (“NTSC” or “PAL”) After adjusting the camera angle, set the switch to “OFF”. After changing the switch settings, press the [RESET] button to reboot the camera.

Audio Signal Input/Output Terminal Connection

Connect the mini jack ø3.5 stereo cable.

L ch : Connect to speakers with built-in amplifier, etc.

R ch : Connect to plug-in power type capacitor microphone



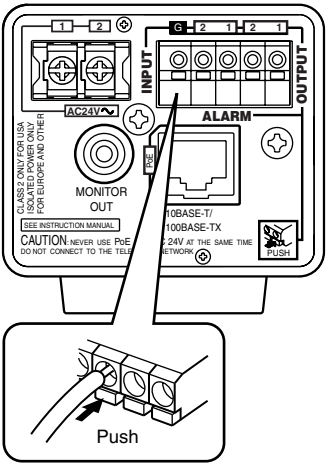
Note:

- Make sure that the external microphone is connected to the R ch and not other channels. When the microphone jack is plugged directly into the unit's [AUDIO IN/ OUT] terminal, loud noises can be distributed to the network.

Alarm Input/Output Terminal Connection

Connect the alarm input/output terminals with external devices, such as a sensor or buzzer.
Plug/Unplug the cable while pressing the button as shown in the diagram below.

Cable to use
- Shielded cable
- Length of 50 m or shorter

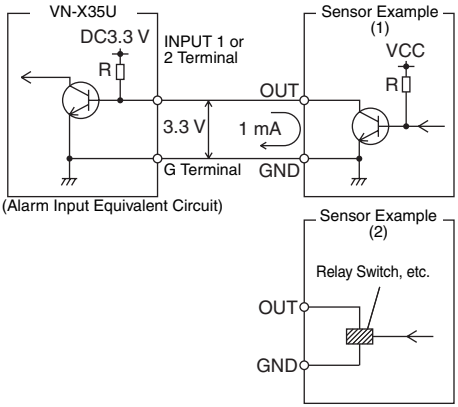


Note:
- Noises from an external source may cause the camera to malfunction even when the cable used is within 50 m. In this case, move the cable away from the noise source.

Alarm Input Terminal

Connect this terminal to sensor devices, such as an infrared sensor, door sensor, metal sensor or manual switch.

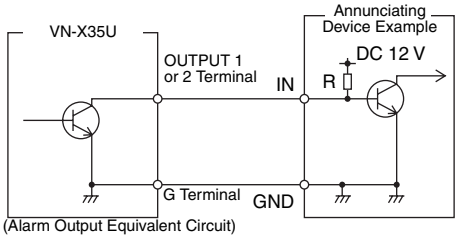
■ Input requirements
- No-voltage relay NPN open collector input
- Polarity of input detection can be selected using a software
- Make/Break (500 ms and above)
- Circuit current at low level: 1 mA
- Applied voltage at high level: 3.3 V



Alarm Output Terminal

Connect this terminal to annunciating devices, such as annunciators, indicators, lights, or buzzers.

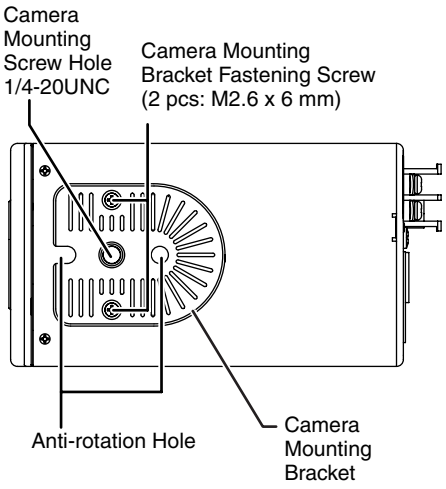
■ Output requirements
- Equivalent to NPN open collector output (Set the output logic using the Internet Explorer)
- Allowable applied voltage: DC12 V and below
- Allowable inflow current: 50 mA
- Momentary (100 ms to 5000 ms) output (Set time using the Internet Explorer (☞ Page 57)

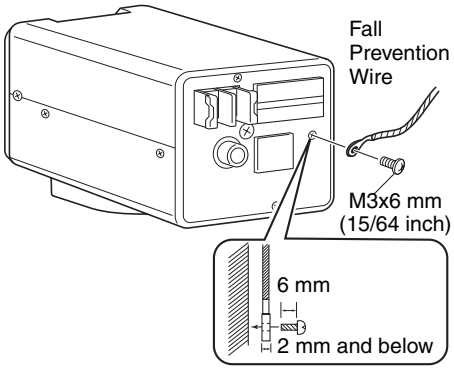


Note:
- Connect the G terminal of this camera to the GND terminal of the annunciating device or alarm input sensor.

Mounting the Camera

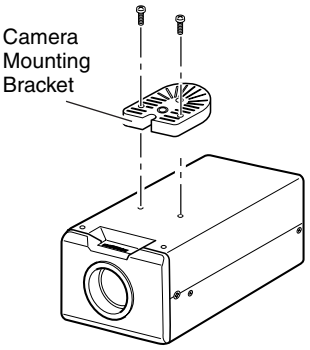
- Use the screw hole on the camera mounting bracket to mount this camera to a fixer or rotating platform.
  Mount the fall prevention wire using the black screw at the rear of the camera unit.





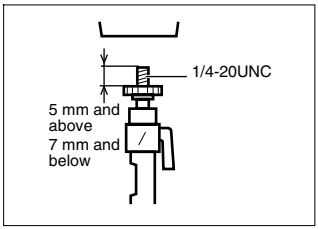
■ Mounting the camera mounting bracket on the top of the camera

The camera mounting bracket is mounted on the bottom surface of the camera by default. To mount it to the top surface, do so by removing the two fastening screws from the camera mounting bracket. Make sure to fasten the screws firmly.



Note:

- When mounting the camera, use screws with a length between 5 mm to 7 mm from the mounting surface. Screws beyond the specified length may damage the interior, while those shorter than specified may cause the camera to fall off, and therefore these must not be used.



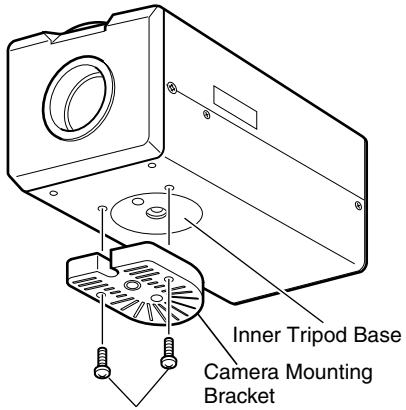
Mounting the Camera (continued)

Warning

- Special attention is required when mounting the camera to a wall or ceiling. Users should get professional contractors to perform mounting operations instead of doing it themselves. Failure to do so may cause the camera to fall off and result in injuries or accidents.
- When mounting the camera to a fixer or rotating platform, ensure that the camera is firmly mounted by using the anti-rotation holes to prevent it from falling off.
- To prevent the camera from falling off, ensure that it is connected to a firm place (ceiling slab or channel) using a fall prevention wire.
- Pay also careful attention to the length, strength, wiring, and material (insulating properties) of the fall prevention wire to be used. The length used should be as short as possible within the permissible range of the mounting length. The wire should be strong enough to withstand the total weight of this product and the fixer. (Pay also attention to the finishing at the end of the wire.)
- Mount the fall prevention wire using the black screw at the rear of the camera unit.
- Designated screw for fastening of fall prevention wire (M3 x 6 mm): Screws beyond the specified length must not be used as doing so may damage the interior.

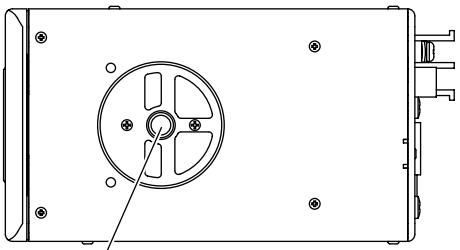
Mounting to the Housing Using the Inner Tripod Base

This product comes with an inner tripod base at the bottom surface. You can use the inner tripod base by removing the camera mounting bracket that is attached to the bottom surface. Mount this product to the miniature housing using the screw hole of the inner tripod base.



Remove the screws for the bracket (2 pcs)

Bottom Surface



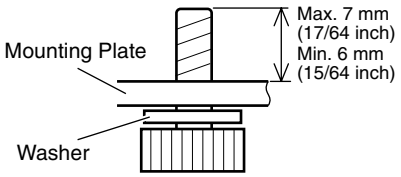
Inner Tripod Base Screw Hole (1/4-20UNC)

Inner Tripod Base Mounting Screw

Make use of 1/4-20UNC screw. The length of the mounting screw shall be between 6 mm to 7 mm from the mounting surface.

Note:

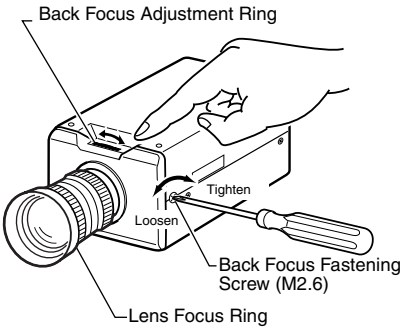
- Using a screw with a length longer than specified may damage the internal parts of the camera, while using a length shorter than specified may cause the camera to fall off. Use a washer to adjust the length from the mounting surface.



Back Focus Adjustment

The CS mount is adjusted to the widest point of the applicable range by default. When using the zoom lens, or when the lens remains out of focus upon using the focus ring, readjustment is required.

- Follow the method below when necessary to adjust the back focus.
- In order to adjust the back focus accurately, open the lens iris using Focus Assist Mode, or put on ND filter. See the chapter of Focus Assist Mode. (ND filter is used to evenly reduce the amount of light entering the lens at all wavelengths.)
- Connect a video monitor to the [MONITOR OUT] terminal at the rear of the unit, followed by adjusting as follows.



Fixed focus lens

Adjust when the lens cannot be brought into focus using the focus ring.

1. Loosen the back focus fastening screw by using a Phillips screwdriver and turning it in the anti-clockwise direction
2. Shoot a fine pattern as far as possible
3. Set the focus ring of the lens to ∞
4. Turn the back focus adjustment ring to obtain a sharp focus
5. Tighten the back focus fastening screw by turning it in the clockwise direction, and ensure that it is securely fastened

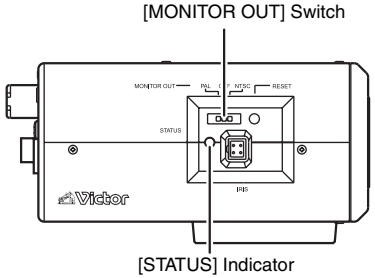
Zoom lens

Perform the zooming operation (Tele - Wide) and adjust accordingly if it is out of focus.

1. Loosen the back focus fastening screw by using a screwdriver and turning it in the anti-clockwise direction
2. Shoot the object or a fine pattern that is farther away than the object
3. Set the zoom lens to Tele and turn the lens focus ring to adjust the focus
4. Set the zoom lens to Wide and turn the back focus adjustment ring to adjust the focus
5. Repeat Steps 3. and 4. for two to three times
6. Tighten the back focus fastening screw by turning it in the clockwise direction, and ensure that it is securely fastened

Focus Assist Mode

The accuracy of focus adjustment is improved when the iris of auto iris lens is open.



1. Set the [MONITOR OUT] selection switch to NTSC or PAL

2. Press [RESET] button for less than 2 seconds to restart

3. Press the [RESET] button for 2 seconds or longer, and release within 5 seconds Doing so switches to the Focus Assist mode.
- [STATUS] indicator alternates lighting up in green color and orange color alternately.
- The central portion of the image is enlarged.

4. Shoot the object or a fine pattern that is farther away than the object

5. Adjust the lens focus

6. Set the [MONITOR OUT] selection switch to "OFF"

7. Press [RESET] button for less than 2 seconds to restart
- Focus assist mode is disabled.
- It takes about one minute for the camera to reboot.
- While rebooting, the [STATUS] indicator lights up in orange.

Memo:
- After focus adjustment, press [RESET] between 2 to 5 seconds to exit focus assist mode.
- You can also enable the Focus Assist mode on the viewer. (☞ Page 93)

Network Requirements

- Ensure that there is sufficient network bandwidth for the data volume to be sent out by VN-X35U. Do not send multicast stream that exceeds the bandwidth. If the entire bandwidth is used by the multicast stream, control of this camera via the network may fail.
- Data volume to be sent by VN-X35U varies with the settings and number of distributions.
- The maximum bit rate for transmission is about 20 Mbps.

Estimation of Total Bit Rate

The total JPEG bit rate from VN-X35U is determined by the VN-X35U settings, number of clients, and the client's requested number of frames. The total MPEG4 bit rate from VN-X35U is determined by the number of distributions. Develop a design upon taking the above into consideration.

Bit Rate of JPEG Stream

The JPEG file size per frame varies with the encoding settings as well as input video signals. The following table shows typical sizes. When VFS is selected, the quantization table during JPEG encoding will be maintained, and the file size will increase/decrease according to the input signals. When AFS is selected, encoding will be performed such that the target file size is the average size of multiple JPEG images.

Image file size

Picture Quality Control Method		Quad VGA File Size	VGA File Size	QVGA File Size
VFS (Variable File Size)		**(typical sizes)**		
	1 (High)	180 KB	80 KB	27 KB
	2	160 KB	60 KB	20 KB
	3	140 KB	40 KB	13 KB
	4 (Medium)	120 KB	30 KB	10 KB
	5	100 KB	25 KB	8 KB
	6	80 KB	20 KB	7 KB
	7 (Low)	60 KB	15 KB	5 KB
AFS (Average File Size)		Selectable between 40 KB to 200 KB	Selectable between 10 KB to 100 KB	Selectable between 3 KB to 33 KB

The maximum number of distributions varies with the bit rate settings as well as the client's requested frame rate. Up to 20 streams can be distributed (including multicast). The total frame rate refers to the sum of these frame rates.

For example, when 10 fps is requested by two clients, and in addition, multicast is transmitted at a rate of 10 fps, the total frame rate will be:

10 + 10 + 10 = 30 fps

For example, when 5 fps is requested by two clients, and in addition, multicast is transmitted at a rate of 5 fps, the total frame rate will be:

5 + 5 + 5 = 15fps

If JPEG file size per piece is 120KB, total bit rate will be:

120KB × 15fps = 1800KB/s = 14.4Mbps (approx.).

Bit Rate of MPEG4 Stream

You can select either the Variable Bit Rate (VBR) or Constant Bit Rate (CBR) system for MPEG4 stream.

When the VBR system is selected, the bit rate varies according to the condition of the input video signals. The VBR system delivers a stable picture quality, but forecast of the bit rate is difficult.

When the CBR system is selected, encoding is performed at a fixed bit rate regardless of the condition of the input video signals. The picture quality varies under the CBR system, but the bit rate can be easily forecast.

You can specify an estimated bit rate for both VBR and CBR. (64 kbps to 8000 kbps)

Bit Rate of Audio

Only 1 audio data stream can be recieved. Data volume for 1 audio stream is 64 kbps. Audio data volume may be calculated using the following formula.

64 kbps x no. of streams

The number of streams is the total number of streams sent via TCP (number of clients), streams sent via multicast, and stream received by VN-X35U

(Example) When VN-X35U sends out 2 audio streams and receives 1 audio stream, data volume will be as follows.

64 kbps x 3 = 192 kbps

Restrictions on the Number of Distributions for VN-X35U

The maximum number of distributions for VN-X35U is determined by the settings as well as requirements from the client.

When only JPEG images are distributed, the maximum number of distributions is determined based on the highest bit rate within the stream. When a distribution request that exceeds the maximum number of distributions is received, this request is denied. For example, if Client A requests for and receives data at 1 Mbps, while Client B requests for and receives data at 5 Mbps, the maximum number of distributions is 4 streams according to the table below.

Maximum number of distributions when only JPEG data is distributed

Distribution at maximum bit rate	Maximum number of distributions	Total maximum bit rate
1 Mbps and below	20	20 Mbps
5 Mbps and below	4	20 Mbps
10 Mbps and below	2	20 Mbps
Larger than 10 Mbps	1	Maximum configurable value (24 Mbps)

When only MPEG4 images are distributed, the maximum number of distributions is determined by the preset bit rate. When a distribution request that exceeds the maximum number of distributions is received, this request is denied.

When distributing only MPEG4 data

Preset bit rate	Maximum number of distributions	Total maximum bit rate
0.6 Mbps and below	20	12 Mbps
3 Mbps and below	4	12 Mbps
6 Mbps and below	2	12 Mbps
Larger than 6 Mbps	1	Maximum configurable value (8 Mbps)

When both JPEG and MPEG4 images are distributed simultaneously, distribution up to two clients for JPEG and MPEG4 respectively is possible. However, distribution requests that exceed a total bit rate of 20 Mbps will be denied.

Total bit rate	Maximum number of distributions for JPEG	Maximum number of distributions for MPEG4
20 Mbps and below	2	2

Network Requirements (continued)

Insufficient network bandwidth

When there is insufficient bandwidth, the number of JPEG frames (frame rate) that the client can acquire will decrease. Delay will also occur in the distribution of images. In the case of MPEG4, noise interference may occur and playback may fail.

There may be a longer delay or interruption in the audio.

Network Delay

When the client acquires JPEG via TCP, VN-X35U will send out data while checking the ACK from the client at the same time. For networks with considerable delay, data cannot be sent out until ACK is received, and therefore the frame rate will drop. In the case of MPEG4, noise interference may occur and playback may fail.

Audio may be interrupted.

Decrease in the frame rate due to network delays can be eliminated by receiving data via multicast.

Network Jitter

When there is considerable network jitter, delay time may be prolonged and the image frame rate may drop. In the case of MPEG4, noise interference may occur and playback may fail.

Audio may be interrupted.

Packet Loss

When acquiring images from VN-X35U via TCP, packet loss may be recovered by TCP transmission. When there is considerable delay in the network, however, missing data may occur and the image frame rate may drop. In the case of MPEG4, noise interference may occur and playback may fail.

Audio may be interrupted.

When packet loss occurs during multicast sending from VN-X35U, the image frame rate may drop. In the case of MPEG4, noise interference may occur and playback may fail.

Audio may be interrupted.

List of Protocols and Port Numbers Used by VN-X35U

VN-X35U uses the protocols and port numbers listed below. Ensure that these ports are allowed through the firewall when a firewall is to be installed.

Protocol/Port No.	Purpose of Use
Source	
TCP/80	JPEG/MPEG4 acquisition, Web Settings page, API, Sending/Acquisition of sound
TCP/5510	VSIP
UDP/5510	VSIP
UDP/9541	VSIP discovery protocol
TCP/10020 TCP/10021 TCP/10023	(Reserved for adjustment)
TCP/32040	Alarm server
TCP/49298	Sound data reception
Destination	
TCP/20, 21	FTP
TCP/25	Mail delivery
TCP/110	POP (Mail Delivery)
TCP/User Setting No.	Sending alarm
UDP/123	SNTP
UDP/User Setting No.	Sending alarm

IP Address Settings

Setting the IP address for VN-X35U

There are two methods to set the IP address for VN-X35U as follows.

(A) Assigning an IP address to VN-X35U from the DHCP server

(B) Assigning a static IP address to VN-X35U

■ (A) Assigning an IP address from the DHCP server

- VN-X35U is set to "DHCP Enable" (the DHCP client feature is on) by default. To assign an IP address from the DHCP server, connect VN-X35U to LAN with DHCP server, and turn on VN-X35U. Allowing the DHCP server to assign the same IP address to VN-X35U every time eases access to VN-X35U.
- For details on IP addresses assigned to VN-X35U, consult your network administrator.
- You can look up the IP address of VN-X35U using the search tool in the "TOOL_E" folder in the supplied CD-ROM.
  For details, please refer to the "Readme" file in the "TOOL_E" folder.
  You can look up the IP address of VN-X35U using the search tool in the supplied CD-ROM.
  For details, please refer to "Readme" file in the CD-ROM.

Note:

- Set the DHCP server such that the same IP address is always assigned to the MAC address of VN-X35U by the DHCP server. Connection may fail if the above setting is not performed.

■ (B) Assigning a static IP address

● System configuration required for setting IP address

The default setting for VN-X35U is "DHCP Enable" (DHCP client feature is turned on). Upon starting up in LAN without DHCP server, VN-X35U starts running with the following IP address after time out of DHCP.

IP address : 192.168.0.2
Subnet mask : 255.255.255.0
Default gateway : Nil

Memo:

- To set a static IP address for VN-X35U, connect VN-X35U, the switching hub and the computer for setting using a straight LAN cable of Category 5 and above.

● Set up the computer for setting the IP address.

- **Minimum computer specifications for setting**

OS : Windows XP (Professional or Home Edition) (SP2)
: WindowsVista Business(SP1)
Web browser : Internet Explorer
XP : Version 6.0
Vista : Version 7.0

Note:

- When setting the IP address for VN-X35U, do so by using a network that is made up only of VN-X35U, the computer for setting and the switching hub.
- Using a hub connected to other network devices or networks via a LAN cable for setting can cause problems.

IP Address Settings (continued)

IP address setting at the computer

Set the computer to an IP address that enables communication with VN-X35U.
Procedures described in this item are intended for Windows XP users.

1. Click [Start]

- Select in the sequence of [Control Panel]−[Network Connection]−[Local Area].
- Windows Vista : Select in the sequence of [Settings]-[Control Panel]-[Network and Sharing Center]-[Manage network connections].

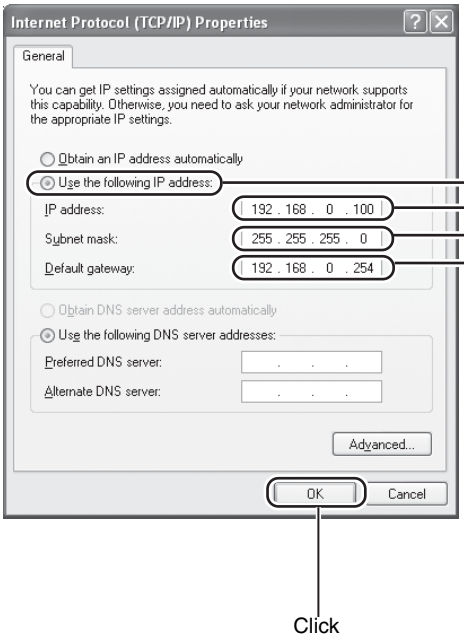
2. The computer on which Internet Explorer is launched automatically selects the connected network

- Right-click and select [Properties].
- Check to ensure that the [Client for Microsoft Networks] and [Internet Protocol(TCP/IP)] check boxes are selected.
- Windows Vista **:** Check to ensure that the [Microsoft Network Client] and [Internet Protocol Version 4 (TCP/IPv4)] checkboxes are selected.

3. Select [Internet Protocol(TCP/IP)] and click [Properties]

Windows Vista **:** Select [Internet Protocol Version 4 (TCP/IPv4)], and click [Properties]

4. Set the IP address


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 192 . 168 . 0 . 100
Subnet mask: 255 . 255 . 255 . 0
Default gateway: 192 . 168 . 0 . 254
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel
Click

① Select [Use the following IP address].

② Specify the [IP address]. (For example, use 192.168.0.100 when VN-X35U is in its default settings and there is no DHCP server)

Memo:
Make sure that you take note of the original IP address before altering.

Note:
Ensure that a duplicate IP address is not specified within the same network environment.

③ Set [Subnet Mask] to a value that is appropriate for the setting operation. Consult the network administrator if you have any queries.
(Use 255.255.255.0 when VN-X35U is in its default settings and there is no DHCP server)

④ When a [Default Gateway] is present, make use of the corresponding IP address (e.g., 192.168.0.254).

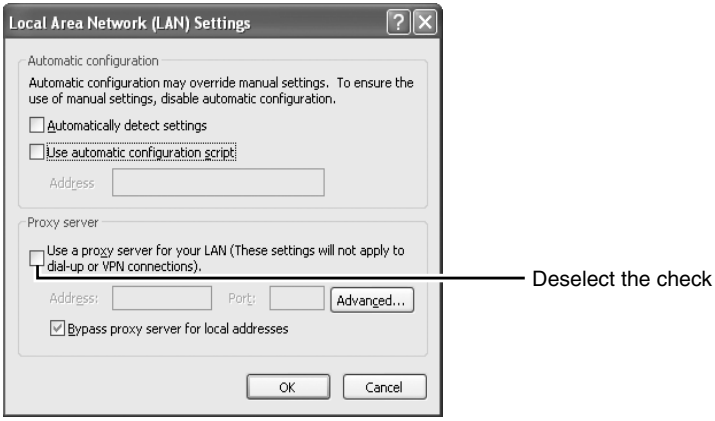
5. Click [OK] on the "Local Area Connection Properties" screen

Internet Explorer Setting

1. Launch the Internet Explorer on the computer

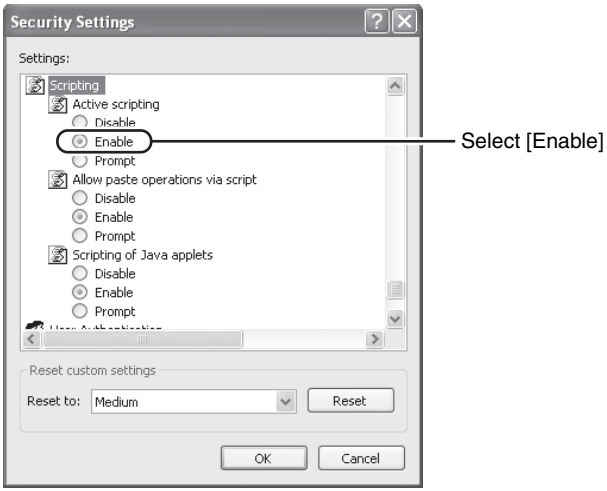
2. When proxy settings are enabled in the Internet Explorer, follow the steps below to disable the proxy of the Internet Explorer

- Select in the order of [Tool]–[Internet Options]–[Connections]–[LAN Setting], followed by deselecting the check for [Use a proxy server for your LAN] under [Proxy Server] of the [Local Area Network (LAN) Settings] window.


Local Area Network (LAN) Settings
Automatic configuration
Automatic configuration may override manual settings. To ensure the use of manual settings, disable automatic configuration.
Automatically detect settings
Use automatic configuration script
Address
Proxy server
Use a proxy server for your LAN (These settings will not apply to dial-up or VPN connections).
Address:
Port:
Advanced...
Bypass proxy server for local addresses
OK
Cancel
Deselect the check

3. If the active script of the Internet Explorer is disabled, follow the steps below to enable it

- Select [Trusted sites] under [Tool]–[Internet Options]–[Security]. Upon doing so, the [Sites…] button directly below becomes active. Click this button and deselect the check in the displayed window, and add the following web site to the zone.
  http://192.168.0.2
- Next, select [Trusted sites] under [Tool]–[Internet Options]–[Security], and press the [Custom Level] button. Select [Enable] under [Scripting]–[Alarm] of the [Security Settings] window that has been opened.



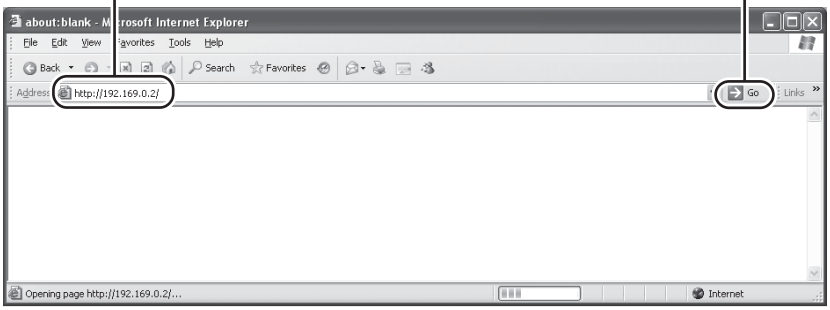
IP Address Settings (continued)

Changing the IP address using the Internet Explorer

1. Launch the Internet Explorer

① Enter the following IP address into the address field.
http://192.168.0.2

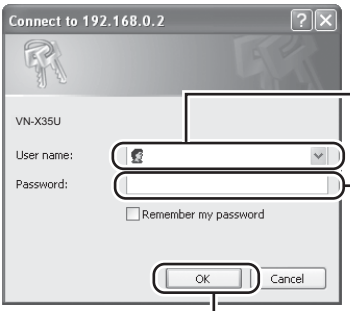
② Click [Go].



Memo:

- If the proxy server settings for access to the Internet via the Internet Explorer is enabled, you may not be able to specify the IP address directly. In this case, change the proxy settings of the Internet Explorer.
- After the [Security Settings] screen appears, press the [OK] button to proceed.

2. Enter the user name and password (login as administrator)

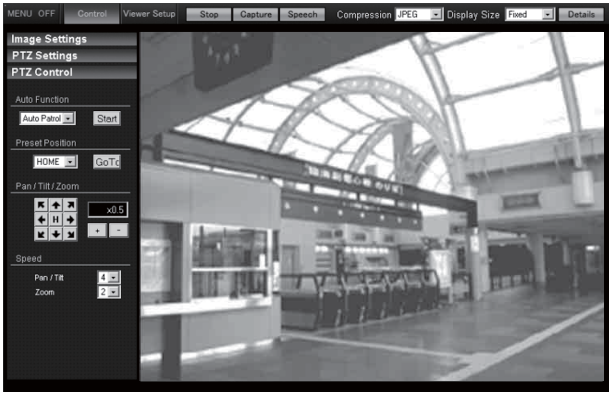


① Enter the user name.
This is set to “admin” by default.

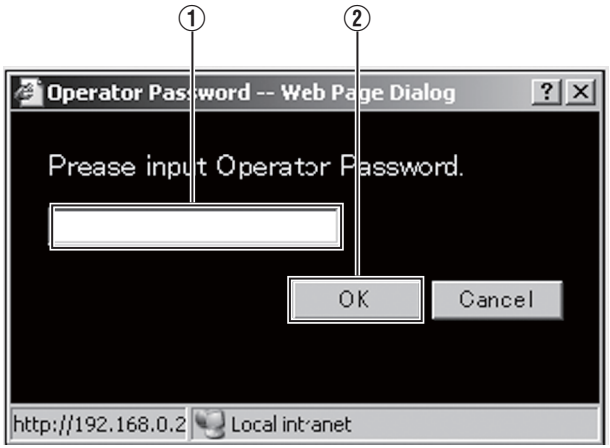
② Enter the password.
This is set to “jvc” by default.

③ Click [OK].

3. Built-in Viewer of VN-X35U is displayed



4. The operator password entry screen appears



① Enter operator password (default is “jvc”).

② Click [OK].

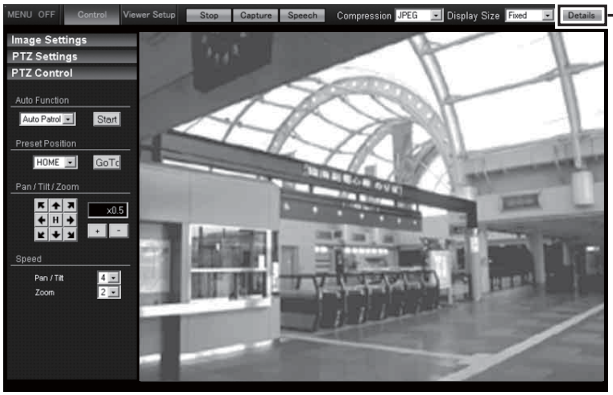
Memo:

- The operator password entry screen does not appear if the password is stored on the computer.Go to Step 5.

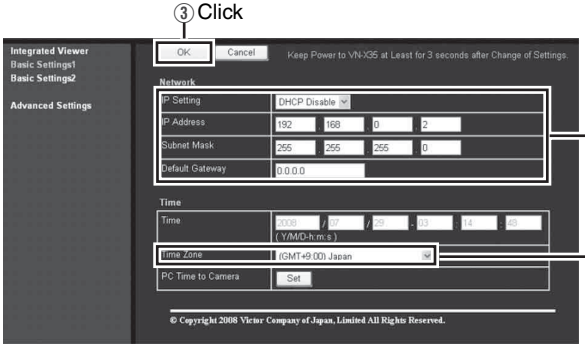
IP Address Settings (continued)

Changing the IP address using the Internet Explorer (continued)

5 Click [Detalis] of the **VN-X35U** Built-in Veiwer



6 The [Basic Settings1] screen appears



A confirmation screen appears. Press the[OK] button. VN-X35U restarts using the new IP address. It takes about one minute for the camera to reboot.

Memo:

- Access from this computer may fail when the IP address of VN-X35U is changed. To enable access to VN-X35U from the same computer, alter the IP address at the computer accordingly.

When the display or configuration of the opened screen appears strange, check using the following procedures.

① Click [Start]–[Control Panel]–[Display] and open the [Display Properties] window
② Click the [Settings] tab in the [Display Properties] windows and click the [Advanced] button
③ Check that [DPI setting] in the [General] tab has become [Normal size(96DPI)]
④ Otherwise, change the setting to [Normal size(96DPI)] andreboot windows

When the IP address of VN-X35U is known

When the IP address of VN-X35U is known, it can be changed by accessing the built-in web page of VN-X35U via the Internet Explorer on the computer.
Refer to
"Setting Using Internet Explorer" (☞ Page 33)

When the IP address of VN-X35U is unknown

IP address settings cannot be changed by accessing via a computer when the IP address of VN-X35U is unknown.
In this case, you can obtain information on the IP address using the following method.

- You can look up the IP address of VN-X35U using the search tool in the "TOOL_E" folder in the supplied CD-ROM.For details, please refer to the "Readme" file in the "TOOL_E" folder.

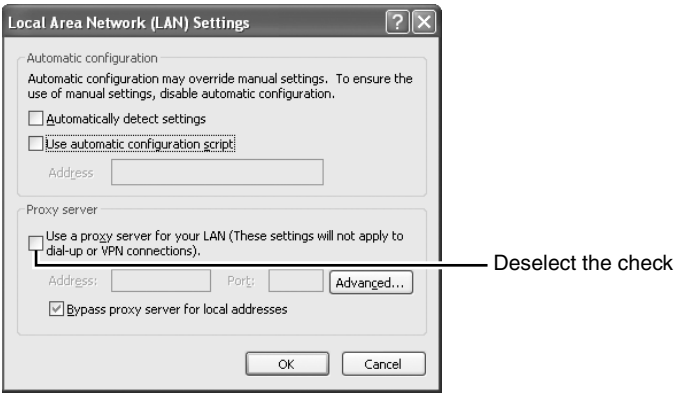
Setup

Internet Explorer Setup

1. Launch the Internet Explorer on the computer

2. When proxy settings are enabled in the Internet Explorer, follow the steps below to disable the proxy of the Internet Explorer

- Select in the order of [Tool]–[Internet Options]–[Connections]–[LAN Setting], followed by deselecting the check for [Use a proxy server for your LAN] in [Proxy Server] of the [Local Area Network (LAN) Settings] window.

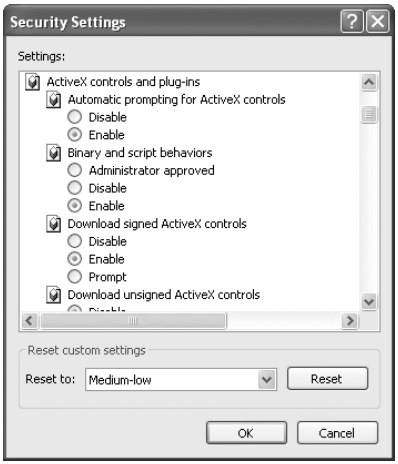

Local Area Network (LAN) Settings
Automatic configuration
Automatic configuration may override manual settings. To ensure the use of manual settings, disable automatic configuration.
Automatically detect settings
Use automatic configuration script
Address
Proxy server
Use a proxy server for your LAN (These settings will not apply to dial-up or VPN connections).
Address:
Port:
Advanced...
Bypass proxy server for local addresses
OK
Cancel
Deselect the check

Setup (continued)

Internet Explorer Setup (continued)

3. If ActiveX controls and plug-ins of the Internet Explorer is disabled, follow the steps below to enable it

- Click [Trusted sites] under [Tool]−[Internet Options]−[Security]. Click on the [Sites…] button directly below, followed by deselecting the check in the displayed window. Add the following web site to the zone.
  http://192.168.0.2
- Click [Trusted sites] under [Tool]−[Internet Options]−[Security]. Select the [Custom Level] button and open the [Security Settings] window. Set all items under [ActiveX controls and plug-ins] in the opened window to [Enable]. Enable also [Allow Script-initiated window without size or position constraints.] under [Miscellaneous].



4. Disable pop-up block

Connection of VN-X35U cannot be established when pop-up block in the Internet Explorer is set to "Enable".

Follow the steps below to set the pop-up block to "disable".

- Selecting [Tool]-[Pop-up Blocker]-[Turn Off Pop-up Blocker] permits all sites.
- To allow only specific sites such as VN-X35U, select [Tool]-[Pop-up Blocker]-[Turn On Pop-up Blocker], followed by selecting [Tool]-[Pop-up Blocker]-[Pop-up Blocker Settings] that becomes active to open the [Pop-up Blocker Settings] window.
  In the opened window, add the address of VN-X35U as a permitted web site address.

5. When plug-in tools such as the Yahoo or Google toolbar are included in the Internet Explorer, disable the pop-up block function of these plug-in tools as well

Enter user name and password

User name and password entry will be required at the beginning.
There are three access authorization levels to VN-X35U. The factory settings are as follows.

User Name	Default Password	Description
admin	jvc	All operations and setting changes are allowed
operator	jvc	Change of settings other than those related to network and maintenance are allowed
user	jvc	Viewing of images is allowed

● **Pages that users have access to**

Restrictions are placed on the pages that users have access to. In addition, links on the web pages are also displayed according to the access authority of the user.

- **admin**

Basic Settings1	[Network] [Time]
Basic Settings2	[Camera] [Encoding] [JPEG] [MPEG4]
Detalis	[Camera] [Encoding] [Audio] [Alarm] [Alarm Environment] [PTZ] [Auto Patrol] [Privacy Mask] [Motion detection] [Network Basic] [Network Details] [Protocol] [Streaming] [Access Restrictions] [Time] [Password] [Maintenance] [LED Settings] [Miscellaneous] [Operation] [Settings] [Position List] [Patrol Infomation]

- **operator**

Basic Settings2	[Camera] [Encoding] [JPEG] [MPEG4]
Detalis	[Camera] [Encoding] [Audio] [Alarm] [Alarm Environment] [PTZ] [Auto Patrol] [Privacy Mask] [Motion detection] [Streaming] [LED Settings] [Miscellaneous] [Operation] [Settings] [Position List] [Patrol Infomation]

- **user**

Detalis	[Miscellaneous]

Memo:

- The [Security Settings] screen appears before the top page is displayed. Press the [Yes] button to proceed.
  If you do not want this warning screen to be displayed, change the Internet Explorer settings as follows.
  - Open [Tool]-[Internet Options]-[Security] and select the [Trusted sites] icon.
  - Next, press the [Custom Level] button, followed by selecting “Enable” for [Miscellaneous]-[Display mixed content].

Note:

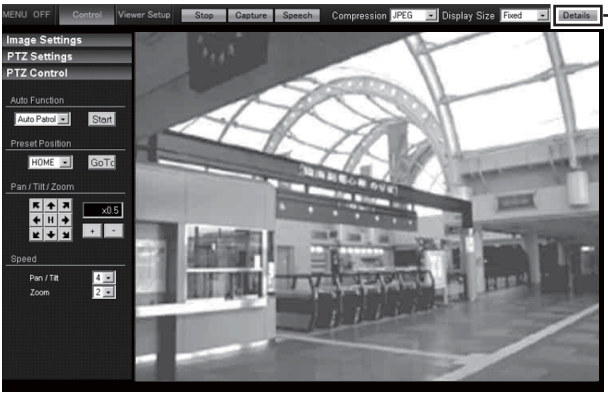
- Do not reset or turn off the power of VN-X35U immediately after the settings are changed. Otherwise, changes may not be saved, and VN-X35U may be restored to the factory settings.

Setting

How to open the setting page

1. Enter IP address of VN-X35U in the address bar of Internet Explorer (☞ Page 30)

- A unified viewer is opened.



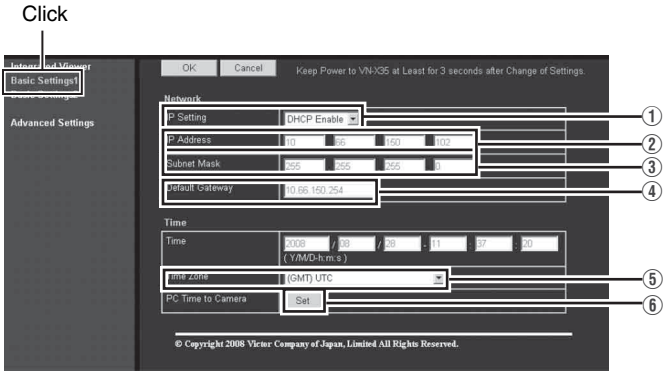
2. Click [Detalis].

- [Basic Settings1] page will be opened if accessed by user name“admin”.(☞ Page 37)
- [Basic Settings2] page will be opened if accessed by user name “operator”.(☞ Page 38)
- [Miscellaneous] page will be opened if accessed by user name“user”.(☞ Page 79)

Basic Settings1

This page is for performing basic setting related to the network.
This page can be used during access using “admin”.

- Click [Basic Settings1].
- Press the [OK] button to enable the new settings.
- If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.



Memo:

- You can open the [Basic Settings1] screen without going through Built-in Viewer by entering the following URL address in the address field of Internet Explorer.
  http://192.168.0.2/cgi-bin/x35display.cgi?x35basicmenu1.html

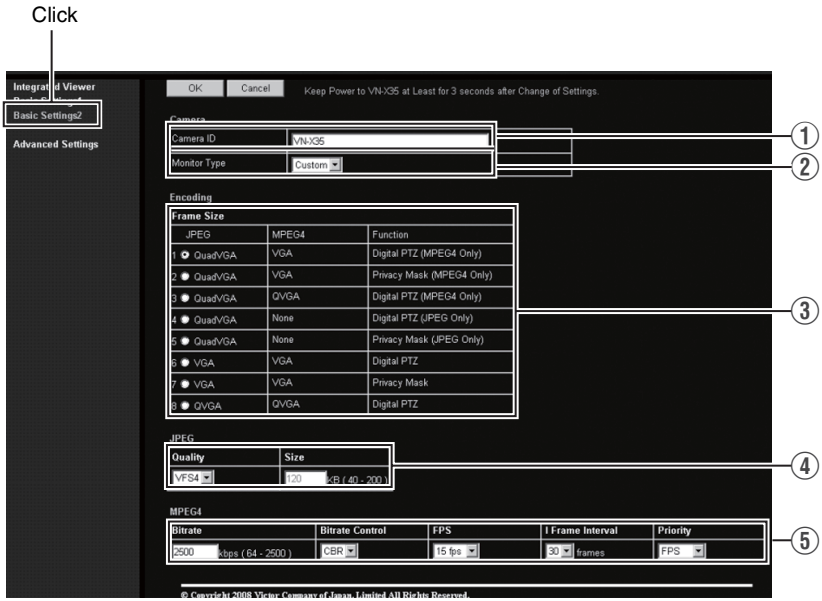
① **IP Setting**	For setting the DHCP client function. Connect VN-X35U to a network environment with a DHCP server when DHCP is to be enabled. If the DHCP server does not exist when DHCP is set to “Enable”, VN-X35U will start running with the 192.168.0.2 IP address and 255.255.255.0 subnet mask in about 2 minutes after startup.(☞ Page 27)
② **IP Address**	For setting the IP address of VN-X35U.
③ **Subnet Mask**	For setting the subnet mask of VN-X35U.
④ **Default Gateway**	For setting the default gateway of VN-X35U Enter 0.0.0.0 if you do not want to set a default gateway.
⑤ **Time**	Displays the clock time of VN-X35U. The time transmitted by VN-X35U is recorded in the JPEG header. Discontinuity may occur in the JPEG header's time immediately before and after changing the time.
⑥ **Time Zone**	For setting the time zone.
⑦ **PC Time to Camera**	Click the [Set] button to set the time of the computer on VN-X35U.

Setting (continued)

Basic Settings2

Page for setting fundamental parameters of “Camera”, “JPEG” and “MPEG4”.
This page can be used during access using “admin” or “operator”.

- Click [Basic Settings2].
- Press the [OK] button to enable the new settings.
- If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.



Memo:

- You can open the [Basic Settings2] screen without going through Built-in Viewer by entering the following URL address in the address field of Internet Explorer.
  http://192.168.0.2/cgi-bin/x35display.cgi?x35basicmenu2.html

<table>
<tr><td>① Camera ID</td><td>Character strings entered here will be written to the JPEG comment segment (item name: camera).
Refer to the API Guide on the file formats of JPEG.</td></tr>
<tr><td>② Monitor Type</td><td>For selecting the monitor type according to the monitor used to display the video images. The picture quality varies according to the type of monitor selected.
Custom : Enables setting of picture quality according to the user's preference. Detailed settings are configured on the detailed settings page of the camera. (☞ Page 41)
LCD1,LCD2 : Picture quality setting for LCD monitors. Two types are available for selection according to the user's preference.
CRT : Picture quality setting for CRT (cathode-ray tube) monitors.
[Set values: Custom, LCD1, LCD2,CRT]</td></tr>
<tr><td>③ Encoding</td><td>For selecting the frame size for each of the JPEG and MPEG4 screens from “Quad VGA” (1280 x 960), “VGA”(640 x 480), and “QVGA” (320 x 240). Select one of the eight different patterns.
Memo:
● Refer to the API Guide on the file formats of JPEG.
■ Combination of distribution sizes and available features
<table>
<tr><td rowspan="2"></td><td colspan="2">Distribution Size</td><td colspan="2">Feature</td></tr>
<tr><td>JPEG</td><td>MPEG4</td><td>Digital PTZ</td><td>Privacy Mask</td></tr>
<tr><td>Pattern ①</td><td>QuadVGA</td><td>VGA</td><td>MPEG4 only</td><td>–</td></tr>
<tr><td>Pattern ②</td><td>QuadVGA</td><td>VGA</td><td>–</td><td>MPEG4 only</td></tr>
<tr><td>Pattern ③</td><td>QuadVGA</td><td>QVGA</td><td>MPEG4 only</td><td>–</td></tr>
<tr><td>Pattern ④</td><td>QuadVGA</td><td>– ※</td><td>JPEG only</td><td>–</td></tr>
<tr><td>Pattern ⑤</td><td>QuadVGA</td><td>– ※</td><td>–</td><td>JPEG only</td></tr>
<tr><td>Pattern ⑥</td><td>VGA</td><td>VGA</td><td>JPEG/MPEG4</td><td>–</td></tr>
<tr><td>Pattern ⑦</td><td>VGA</td><td>VGA</td><td>–</td><td>JPEG/MPEG4</td></tr>
<tr><td>Pattern ⑧</td><td>QVGA</td><td>QVGA</td><td>JPEG/MPEG4</td><td>–</td></tr>
</table>
※ Images are not distributed. It is displayed in white on viewer.</td></tr>
</table>

Setting (continued)

Basic Settings2 (continued)

④ **JPEG**		
	Frame Size	For specifying the JPEG picture quality (rate control mode) and size (target file size). When “VFS1” to “VFS7” is selected, the quantization table during JPEG encoding will be maintained and the file size will increase/decrease according to the input signals. Typical sizes will be displayed in the Size field. When recording JPEG data to a recorder with a limited storage capacity, the maximum recording time may vary as the file size fluctuates under this setting. When “AFS”is selected, encoding is performed such that the target file size is the average size of multiple JPEG images. You can enter the target size in the Size field. **[Picture quality values : VFS1 to VFS7, AFS]** **Memo:** ● The picture size can be specified only when the picture quality value is set to AFS. **[Size setting range in Quad VGA mode:40 KB to 200 KB]** **[Size setting range in VGA mode:10 KB to 100 KB]** **[Size setting range in QVGA mode:3 KB to 33 KB]**
⑤ **MPEG4**		
	Bitrate	For setting the MPEG4 encoding bit rate. **[Set values : 64 kbps to 8000 kbps]**
	Bitrate Control	For selecting whether to set the MPEG4 rate control mode to CBR (Constant Bit Rate) or VBR (Variable Bit Rate). CBR : Encoding is performed at a fixed bit rate regardless of the condition of the input video signals. Enables easy forecast of the bit rate. VBR : Changes the bit rate according to the condition of the input video signals. Picture quality is stable, but forecast of the bit rate is difficult.
	FPS	For setting the MPEG4 frame rate. **[Set values : 1 fps, 7.5 fps, 10 fps, 15 fps]**
	I Frame Interval	For setting the I-frame interval. MPEG4 starts encoding from the I-frame.Shortening the interval stabilizes the picture quality even when there are rapid changes in the video image. However, the picture quality for images with little change will deteriorate. In addition, when multicast packet loss occurs, the time interval required to restore the image is shorter. **[Set values : 15, 30, 45, 60, 75]**
	Priority	For selecting whether to assign priority to the frame rate or picture quality during MPEG4 encoding. FPS : Assigns priority to frame rate. Select this setting to enable smooth monitoring of motion images. Quality : Assigns priority to picture quality.

Camera Page

This page is for setting the camera's parameters.

This page can be used during access using "admin" or "operator".

- Click [Advanced Settings] to display setting menu.
- Click [Camera].
- Press the [OK] button to enable the new settings.
- If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.To restore the settings of this page to the factory settings, press [Initialize] button.

Setting (continued)

Camera Page (continued)

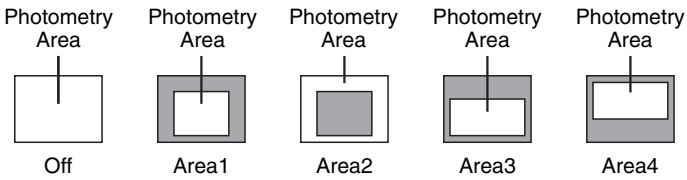
① **Camera ID**	Character strings entered here will be written to the JPEG comment segment (item name: camera). Refer to the API Guide on the file formats of JPEG.
② **Monitor Type**	For selecting the monitor type according to the monitor used to display the video images. The picture quality varies according to the type of monitor selected. Custom : Enables setting of picture quality according to the user's preference. LCD1, LCD2:Picture quality setting for LCD monitors. Two types are available for selection according to the user's preference. CRT : Picture quality setting for CRT (cathode-ray tube) monitors. **[Set values: Custom, LCD1, LCD2, CRT]** **Memo:** ● Select Custom if you want to set the gamma and enhanced bandwidth values.
③ **Black Level**	For adjusting the black level. Lowering the value darkens the video image. Increasing the value brightens the image. **[Setting range: 0 to 2]** **Memo:** ● If the black level is set to "0", this may be too low depending on the monitoring device, or dark area will become complete black. ● When using MPEG4 images, set to either "1" or "2".
④ **Gamma**	To alter the appearance of dark areas in a video image, adjust the gamma curve. Off : Do not perform gamma correction. The entire image appears dull. -3 to 3 : Perform gamma correction. When this is set to "0", standard gamma correction is performed. Setting to a smaller value darkens the image, while increasing the value brightens the image. **[Set values: Off, -3 to 0 to 3]** **Memo:** ● The set value is fixed when the monitor type is set to "LCD1", "LCD2", or "CRT".
⑤ **Enhance Frequency**	For setting the type of edge enhancement. Low : Enhances both thick and thin edges. High : Enhances thin edges. **[Set values: Low, High]** **Memo:** ● The set value is fixed when the monitor type is set to "LCD1", "LCD2", or "CRT".
⑥ **Enhance Level**	For setting the intensity of edge enhancement. Larger value : Increases the intensity of edge enhancement. Smaller value : Decreases the intensity of edge enhancement. **[Setting values: -5 to 0 to 5]**

⑦ **Color Level**	For adjusting the color level. Larger value : Increases the color level. Smaller value : Decreases the color level. **[Setting values: -5 to 0 to 5]**
⑧ **AGC**	For setting the AGC (automatic gain control) level. Off : Disables the AGC feature Mid : When the amount of light is insufficient High : When the amount of light is particularly insufficient Super : When the brightness level is insufficient even upon setting to High. **[Set values: Off, Mid, High, Super]** **Memo:** ● This feature cannot be configured when the Easy Day/Night feature is set to Black and White or Auto. ● The screen appears grainy at dark locations when the AGC feature is in use.
⑨ **Sense Up**	This feature is used to raise the sensitivity level by lengthening the exposure time. You can specify the number of times by which the sensitivity level is to be increased automatically when the object becomes dark. When "x16" is selected, the sensitivity level will automatically increases continuously until it is 16 times of the level when "Off" is selected. When the sensitivity level increases, the shutter speed slows down and motion becomes unnatural. When set to "Off", [Sense Up] is disabled. **[Set values: x2(1/7.5s), x4(1/3.75s), x8(0.5s), x16(1.1s), x22(1.5s)]** **Memo:** ● Upon raising the sensitivity level, the screen may appear grainy or white, or white defects may occur. However, this is not a malfunction. ● When Sense Up is set to a value other than "Off", flickers occur under the light of fluorescent or mercury lamps. This is not a malfunction of the camera, but is due to principles related to Sense Up. ● When the shutter is set to a value between 1/250 to 1/10000, set Sense Up to "Off".
⑩ **ALC Priority**	For setting the priority of ALC (feature for maintaining the video level according to the brightness of the object). You can select whether to assign priority to the motion or picture quality when the object becomes dark. Motion : Assigns priority to motion. When the object becomes dark, priority is given to AGC (automatic gain control), and therefore this is suitable for shooting fast-moving objects. Quality : Assigns priority to picture quality. When the object becomes dark, priority is given to the Sense Up feature, and therefore this is suitable for shooting objects requiring a high picture quality. **[Set values: Motion, Quality]**

Setting (continued)

Camera Page (continued)

⑪ **Shutter Speed**	For setting the shutter speed. Auto, Auto(1/15 - 1/100) : Varies the shutter speed automatically according to the brightness. 1/15 to 1/10000 : Fixed shutter speed. Flickerless : Reduces flickers due to fluorescent lamps. **[Set values:Auto, Auto(1/15 - 1/100), 1/15, 1/25, 1/30, 1/50, 1/60, 1/100,1/250, 1/500,1/1000, 1/2000, 1/4000, 1/10000, Flickerless]** **Memo:** ● "Auto" is only recommended when using a manual iris lens. ● Flickers may occur when this is set to a value other than "1/50", "1/100", or "Flickerless". When "Flickerless" is selected, flickers may occur when the Sense Up feature is used. ● When Sense Up is set to a value other than "Off", the shutter speed cannot be set to a value between 1/250 to 1/10000.
⑫ **Easy Day and Night**	For setting the Easy Day and Night feature. Color : Set to the color mode at all times. Black and White : Set to the black-and-white mode at all times. Auto : Image color switches to black-and-white when the luminance level is low. **[Set values:Color, Black and White, Auto]** **Memo:** Level setting of the brightness when switching to black-and-white images cannot be changed.
⑬ **EV Compensation**	For setting EV (Exposure Value) correction. Enables setting between -9(-3EV) to 6(+2EV). You can specify settings in each 1/3 EV step. Decreasing the value darkens the images, while increasing the value brightens the image. **[Set values: -9 to 0 to 6]**

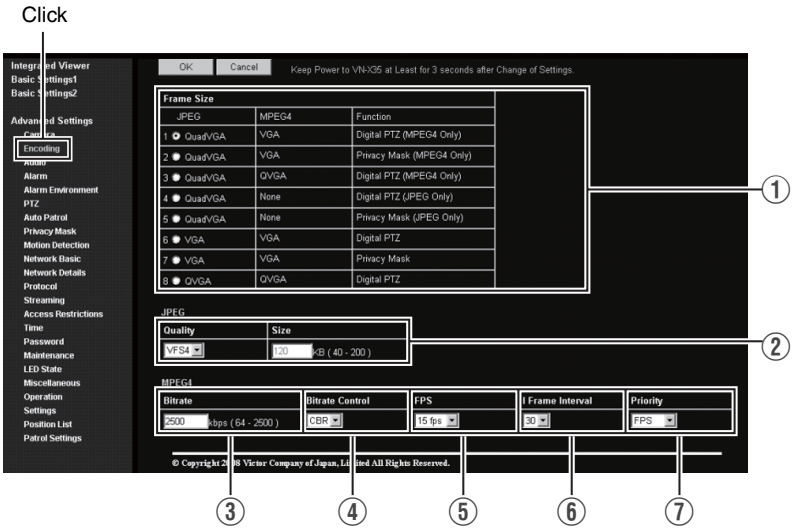
⑭ **White Balance**	For selecting the white balance control feature. White balance can be adjusted for a light source with a color temperature range of 2800K to 9500K.
ATW	Switches to the Auto-Tracking White Balance (automatic color temperature tracking) mode. Adjusts the white balance automatically according to the color temperature of the light.
AWC	Switches to the Auto-White Balance Control mode. In the AWC mode, values entered for the [AWC R-GAIN] and [AWC B-GAIN] items are applied to white balance.
One Push AWC	Executes AWC (automatic white balance control). Execute by placing a white object around the center of the screen in a location with a lighting condition that is similar to the object to be shot. ● Pressing the [One Push] button replaces the [AWC R-GAIN] and [AWC B-GAIN] values with the values of the AWC execution results. ● Even when white balance is set to ATW, pressing the [One Push] button switches the mode automatically to AWC.
AWC R-GAIN	For setting the gain of R (red) when in the AWC mode. Larger value : Increases the redness. Smaller value : Decreases the redness. **[Set values: 0 to 85 to 255]**
AWC B-GAIN	For setting the gain of B (blue) when in the AWC mode Larger value : Increases the blueness. Smaller value : Decreases the blueness. **[Set values: 0 to 219 to 255]**
⑮ **Back Light Compensation**	For selecting the backlight compensation feature. Set this feature when there is a bright light source in the same direction as the object. Enables unwanted light sources to be excluded from the photometry area. Off : Disables backlight compensation. Area1 to 4 : For selecting a photometry area from the four available types. **[Set values: Off, Area1, Area2, Area3, Area4]**  **Memo:** ● The backlight compensation area is not linked to digital PTZ.

Setting (continued)

Encoding Page

This page is for setting JPEG and MPEG4 encoding parameters.
This page can be used during access using "admin" or "operator".

- Click [Advanced Settings] to display setting menu.
- Click [Encoding].
- Press the [OK] button to enable the new settings.
- If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.
- When settings on this page are altered during playback using Built-in Viewer, reboot the viewer.
- There is a maximum limit to the bit rate for transmission by VN-X35U. If a bit rate that exceeds the maximum limit is specified, this new setting will not be applied. For details on the maximum transmission limit, refer to the section on "Network Requirements" (☞ Page 24).



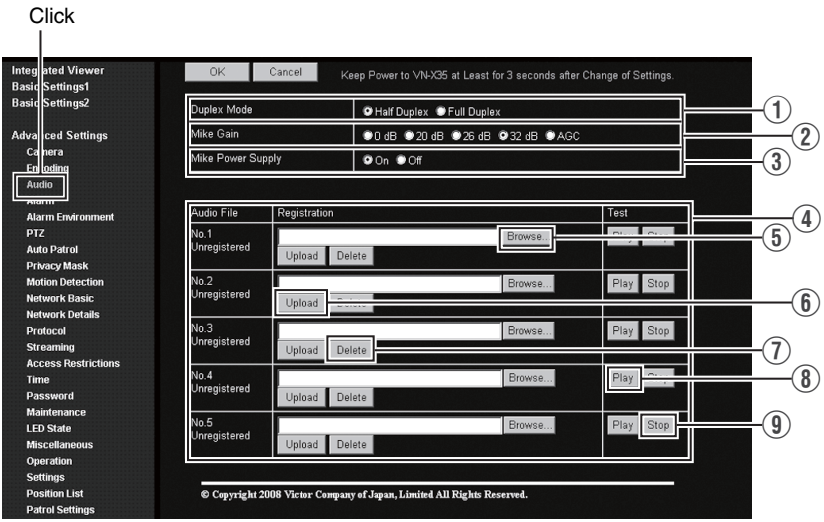
① **Frame Size**		For selecting the frame size of each JPEG or MPEG4 screen to Quad VGA (1280 × 960), VGA (640 × 480) or QVGA (320 × 240). Select one of the eight different patterns.(☞ Page 39)
JPEG		
	② **Quality/Size**	For specifying the JPEG picture quality (rate control mode) and size (target file size). When "VFS1" to "VFS7" is selected, the quantization table during JPEG encoding will be maintained and the file size will increase/ decrease according to the input signals. Typical sizes will be displayed in the Size field. . When recording JPEG data to a recorder with a limited storage capacity, note that the maximum recording time may vary as the file size fluctuates under this setting. When " AFS" is selected, encoding is performed such that the target file size is the average size of multiple JPEG images. You can enter the target size in the Size field. **[Quality field set values: VFS1 to VFS7, AFS]** **Memo:** ● The picture size can be specified only when the picture quality value is set to AFS. **[Size setting range in Quad VGA mode:40 KB to 200 KB]** **[Size field setting range for VGA:10 KB to 100 KB]** **[Size field setting range for QVGA:3 KB to 33 KB]**
MPEG4		
	③ **Bitrate**	For setting the MPEG4 encoding bit rate. **[Setting range: 64 kbps to 8000 kbps]**
	④ **Bitrate Control**	For selecting whether to set the MPEG4 rate control mode to CBR (Constant Bit Rate) or VBR (Variable Bit Rate). CBR : Encoding is performed at a fixed bit rate regardless of the condition of the input video signals. Enables easy forecast of the bit rate. VBR : Changes the bit rate according to the condition of the input video signals. Picture quality is stable, but forecast of the bit rate is difficult.
	⑤ **Frame Rate**	For setting the MPEG4 frame rate. **[Setting range: 1 fps, 7.5 fps, 10 fps, 15 fps]**
	⑥ **I Frame Interval**	For setting the I-frame interval. MPEG4 starts encoding from the I-frame. Shortening the interval stabilizes the picture quality even when there are rapid changes in the video image. However, the picture quality for images with little change will deteriorate. In addition, when multicast packet loss occurs, the time interval required to restore the image is shorter. **[Set values: 15, 30, 45, 60, 75]**
	⑦ **Priority**	For selecting whether to assign priority to the frame rate or picture quality during MPEG4 encoding. FPS : Assigns priority to frame rate. Select this setting to enable smooth monitoring of motion images. Quality : Assigns priority to picture quality.

Setting (continued)

Audio Page

This page is for setting the audio parameters.
This page can be used during access using “admin” or “operator”

- Click [Advanced Settings] to display setting menu.
- Click [Audio].
- To enable the new settings, press the [OK] button.



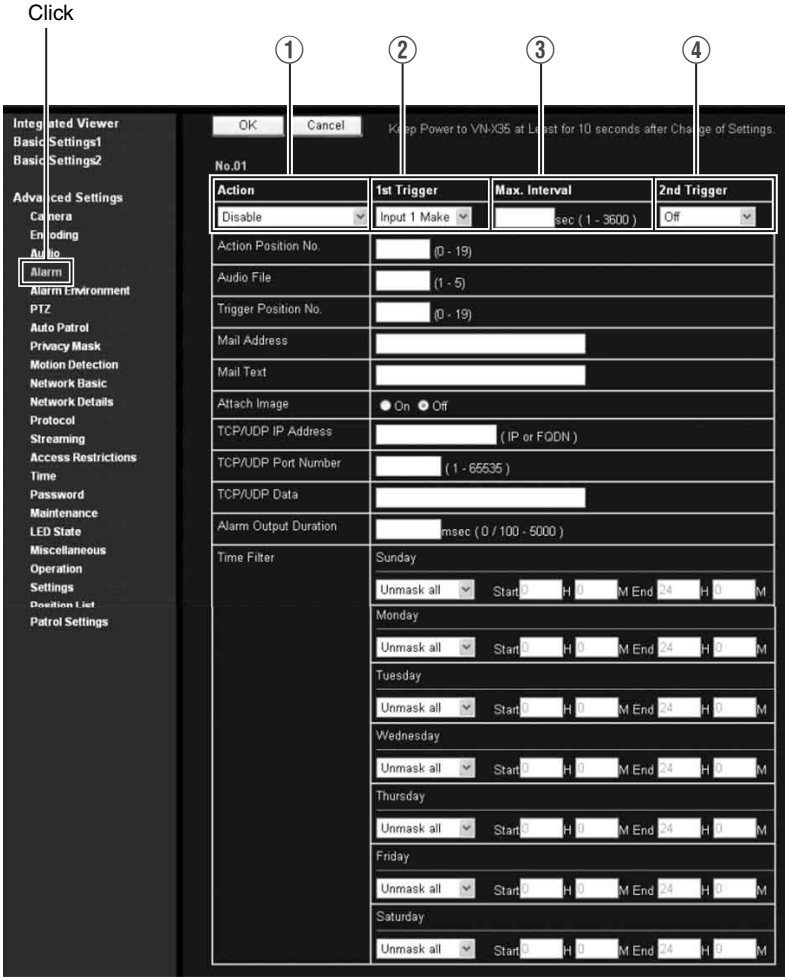
① **Duplex Mode**	For setting the audio transmission method. When half duplex is selected, audio sent to computers from the camera is muted when audio is transmitted from a computer to the camera. When full duplex is selected, you can send audio to the camera from a computer while listening to audio sent to computers from the camera **[Set values: Half Duplex, Full Duplex]** **Memo:** ● When this is set to Full Duplex, audio sound sent out from the computer may be returned to the computer as echo through the external microphone connected to the camera. If this occurs, set to Half Duplex.
② **Mike Gain**	For setting the gain value for the external microphone connected to VN-X35U. **[Set values: 0 dB, 20 dB, 26 dB, 32 dB , AGC]**
③ **Mike Power Supply**	For specifying the power supply for the external microphone connected to VN-X35U. **[Set values : On, Off]**
④ **Audio File No.1 to No.5**	For registering audio files that can be outputted from the audio output terminal of VN-X35U when an alarm is triggered. ■ To output the registered audio file: ● Get ready an audio file on the computer with the following specifications, and register it to the camera. **Audio file specifications** ● File format : WAV file ● Encoding format : linear PCM ● Sampling frequency : 8 kHz ● Quantization bit : 16 bit ● Monaural ● Maximum size : 30 seconds (total of playback files 1 to 5) ● Configure the action item on the Alarm page to [Play Audio] (☞ Page 50) **Note:** ● Playback of the audio file stops if the audio transmission feature of Built-in Viewer is enabled during playback of the file. ● When the audio transmission feature of Built-in Viewer is running, audio files cannot be played back. Press the [Register] button to register the selected audio file on VN-X35U. Press the [Delete] button to delete an audio file registered on VN-X35U. Press the [Browse] button to show the file selection screen and make a selection from the available audio files. Press the [Play] button to play back an audio file registered on VN-X35U, and send output to the Audio signal output terminal of VN-X35U. Press the [Stop] button to stop playing an audio file. **Memo:** ● WAV file can be recorded or created using Sound Recorder or general sound editing software.

Setting (continued)

Alarm Page

This page is for setting actions when there is an alarm.
Up to 5 actions (No. 01 to No. 05) may be set.
This page can be used during access using “admin” or “operator”.

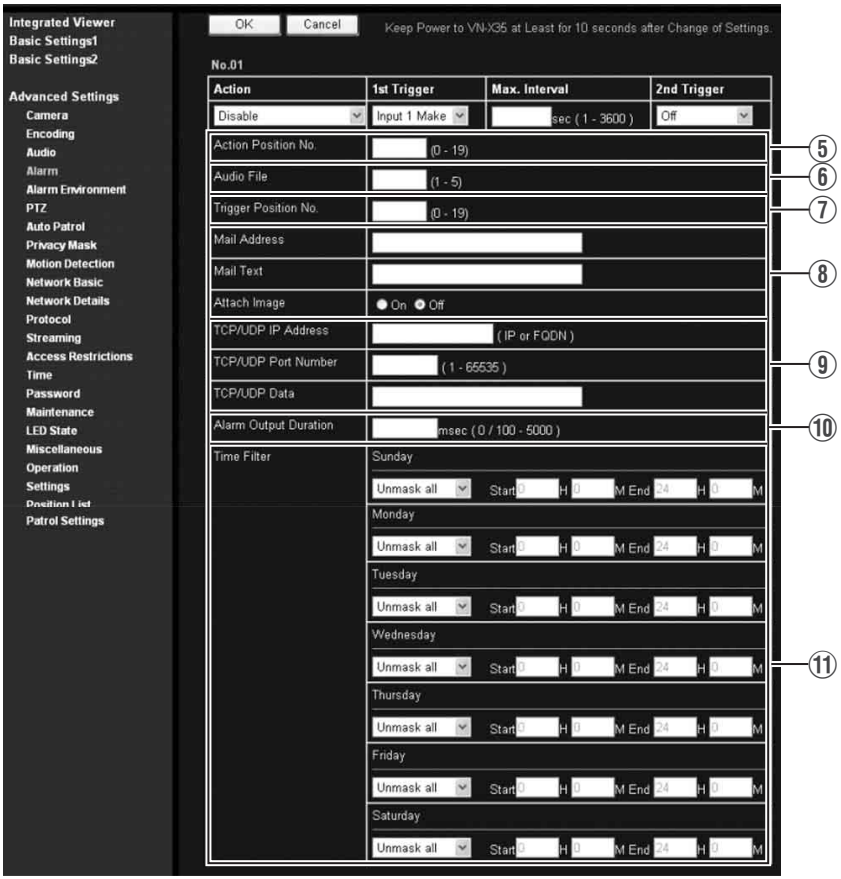
- Click [Advanced Settings] to display setting menu.
- Click [Alarm].
- Press the [OK] button to enable the new settings. Only items that are valid under the selected action will be saved. When Disable is selected for the action, all settings will be restored to their default values.
- If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.



① **Action**	For specifying the type of action. Disable : Does not trigger any action. Mail : Sends out e-mail. Specify the recipient's mail address. The title of the mail will appear as [Alarm from VN-X35U] and the sender as [Camera ID]. Enter the message to send in [Mail Text]. Input up to 127 alphanumeric characters. To attach the latest image to the mail, set [Attach Image] to "On". FTP : Sends out pre-/post-recorded JPEG files via FTP. See the page on Alarm Environment for details on pre-/post-recording and FTP server settings. (☞ Page 54) The maximum transmission rate of FTP is 1 Mbps. If a new FTP trigger occurs during post-recording, the recorded portion is treated as pre-recording and a new post-recording starts. During FTP transmission after completing the post-recording, a new post-recording starts if a new FTP trigger occurs. TCP : Sends out the character string entered in the [TCP/UDP Data] field to the destinations specified in [TCP/UDP IP Address] and [TCP/UDP Port Number] via TCP. UDP : Sends out the character string entered in the [TCP/UDP Data] field to the destinations specified in [TCP/UDP IP Address] and [TCP/UDP Port Number] via UDP. TCP/UDP Data : Input up to 127 alphanumeric characters. Output 1 Make : Changes Alarm Output 1 to Make. Output 1 Break : Changes Alarm Output 1 to Break. Output 2 Make : Changes Alarm Output 2 to Make. Output 2 Break : Changes Alarm Output 2 to Break. Set the alarm output time in the [Alarm Output Duration] field. Position : Moves to the preset position specified in the Action Position No. item ⑤. (☞ Page 53) Play Audio : Play back an Audio File registered on VN-X35U. (☞ Page 49)
② **1st Trigger**	For specifying the first trigger to be activated. **[Set values:Input 1 Make, Input 2 Make, Input 1 Break, Input 2 Break, Motion detection, Position]** **Memo:** ● When the second trigger is turned off, the action will be invoked only by the first trigger. ● If [Motion detection] or [Position] is selected as the first trigger, [Max.Interval] and [2nd Trigger] cannot be selected..

Setting (continued)

Alarm Page (continued)



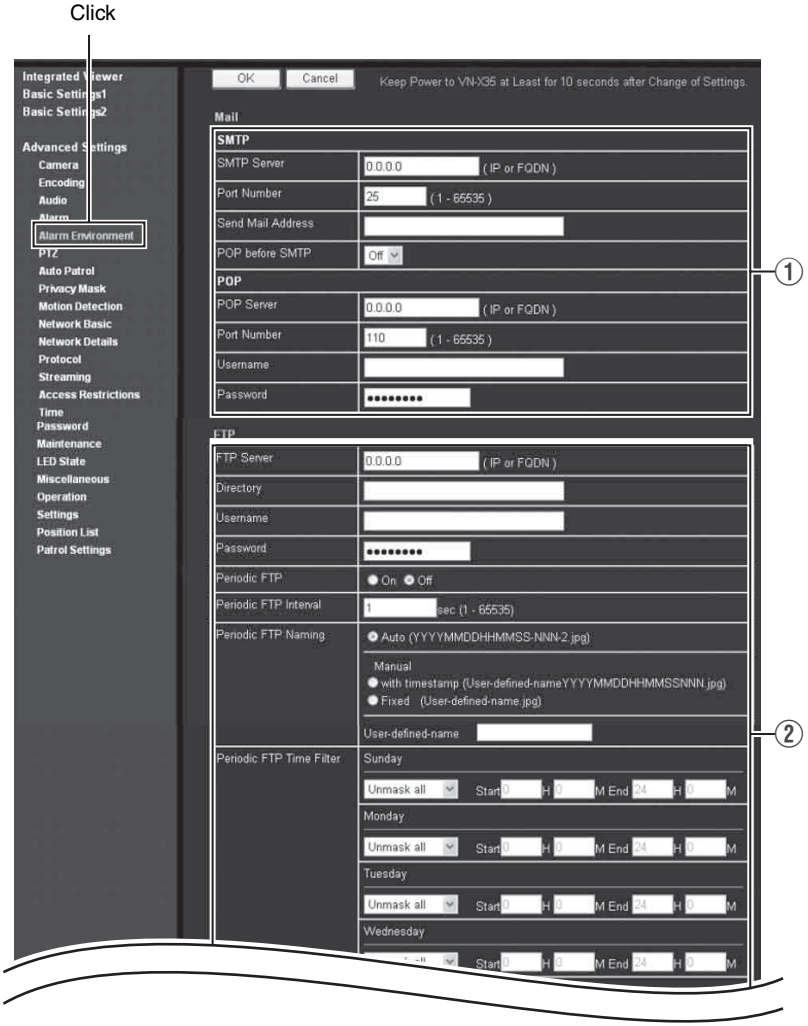
③ **Max. Interval**	Enabled when both the first and second triggers are specified. Specify the maximum interval between the first and second triggers. An action will be invoked only if the interval between the first and second triggers is within the maximum interval.
④ **2nd Trigger**	For specifying the second trigger for invoking an action. Either alarm input (make) or alarm input (break) can be selected. **[Set values:Input 1 Make, Input 2 Make, Input 1 Break, Input 2 Break]**
⑤ **Action Position No.**	For setting the position number to move to when the [Action] item ① is set to "Position". **[Setting range : 0 to 19]**
⑥ **Audio File**	For setting the file number to play back when the [Action] item ① is set to "Play Audio". **[Setting range : 0 to 5]**
⑦ **Trigger Position No**	For setting the file number to move when the [1st Trigger] item B is set to "Position". **[Setting range : 0 to 19]**
⑧ **Mail**	Mail Address : For entering the recipient's mail address. Mail Text : For entering the mail transmission data. Input up to 127 alphanumeric characters. Attach Image : For specifying whether to attach images to the mail.
⑨ **TCP/UDP**	TCP/UDP IP Address : For entering the address when alarm action notification is to be sent via TCP or UDP. (IP or FQDN) TCP/UDP Port Number : For entering the port number when alarm action notification is to be sent via TCP or UDP. (1 to 65535) TCP/UDP Data : For entering the data to send during TCP or UDP notification. Input up to 127 alphanumeric characters.
⑩ **Alarm Output Duration**	For setting the alarm output time from the alarm output terminal. When this is set to "0", it is not possible to revert back to break (or make) after changing to make (or break). **[Setting range: 0, 100 msec to 5000 msec]**
⑪ **Time Filter**	For specifying the alarm action with respect to each day of the week and setting the corresponding time of the day. Applicable day of week : Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday Alarm action Unmask Span : For specifying the time period for invoking the action Mask Span : For specifying the time period to stop the action Unmask All : Activated at all times Mask All : Stopped at all times Applicable time period : For specifying the start and end time in hours and minutes.

Setting (continued)

Alarm Environment Page

This page is for setting alarm-related environments.
This page can be used during access using “admin” or “operator”.

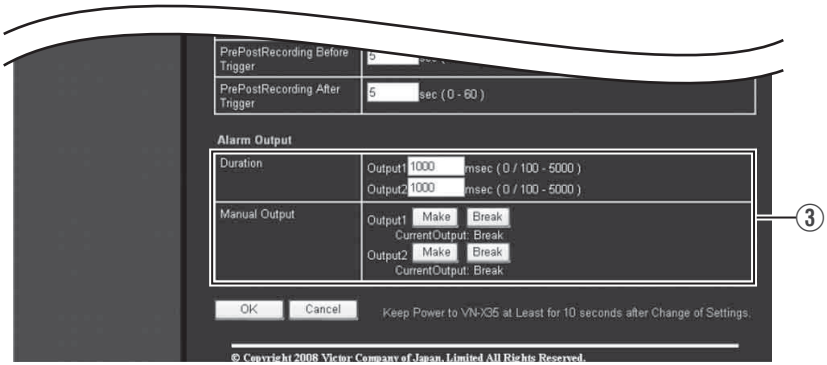
- Click [Advanced Settings] to display setting menu.
- Click [Alarm Environment].
- Press the [OK] button to enable the new settings.
- If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.



① **Mail**	For setting the mail environment when [Mail] is specified as an action on the Alarm page.[SMTP] and [POP] can be used. Configure only the [SMTP] settings under usual circumstances. Enter the camera's mail address as the recipient's mail address. Configure the [POP] settings as well if [POP before SMTP] is enabled. In addition, if FQDN is set for [SMTP Server], configure also the DNS server settings on the [Network Basic] page. (☞ Page 65) **Memo:** **What is FQDN (Fully Qualified Domain Name)?** This is a fully qualified domain name that indicates a notation method of describing the entire host or domain name on the TCP/IP network without abbreviating. For example, if the host name is www and the domain name is victor.co.jp, this will be denoted as "www.victor.co.jp" in FQDN.
② **FTP**	For setting the FTP environment when [FTP] is specified as an action on the Alarm page. This is common with the FTP environment when using the periodic FTP on this page. When [Directory] is left blank, FTP transfer will be performed to the home directory of the FTP server. To enable FTP transfer to a directory below the home directory, set the corresponding directory name in [Directory]. Delimit the directory using "/". Example: subdir1/subdir2 Destination directory of FTP transfer will be dependent on the FTP server if "/" is added at the beginning. Setting [Periodic FTP] to "On" enables transfer of the latest JPEG images to the FTP server at regular intervals. Specify the interval in seconds for [Periodic FTP Interval]. File name: Select a type from the two types of periodic FTP file names. When "Auto" is selected, images are generated from the year, month, day, hour, minute, second, and number. Example: 20071114161032-001-2.jpg When "Manual" is selected, you can select a file name generation method from the following. ● File name containing only the character string entered in [User-defined-name] Example: Camera1.jpg ● File name with the year, month, day, hour, minute, and second added to [User-defined-name] Example: Camera1_20071114161032001.jpg The name of the file to be transmitted via FTP is made up of the action number, year, month, day, hour, minute, second, number and trigger flag. Example: 01-20070711152904-001-0.jpg The first two digits are the action number, and the following 14 digits denote the year, month, day, hour, minute and second. The three digits after the first hyphen is the number of the series of JPEG files to be sent via the FTP. The number starts from "000". The last digit denotes the trigger flag. This is displayed as "1" only for the JPEG file during a trigger input, and as "0" if otherwise.

Setting (continued)

Alarm Environment Page (continued)


PrePostRecording Before Trigger
PrePostRecording After Trigger
5
sec (0 - 60)
Alarm Output
Duration
Output1 1000 msec (0 / 100 - 5000)
Output2 1000 msec (0 / 100 - 5000)
Manual Output
Output1 Make Break
CurrentOutput: Break
Output2 Make Break
CurrentOutput: Break
OK
Cancel
Keep Power to VN-X35 at Least for 10 seconds after Change of Settings.
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③

<table>
<tr><td colspan="2">② FTP</td><td>Time Filter:
For specifying the periodic FTP transfer action with respect to each day of the week and setting the corresponding time of the day.
Applicable day of week : Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday
Alarm action
Unmask Span : For specifying the time period for invoking the action
Mask Span : For specifying the time period to stop the action
Unmask All : Activated at all times
Mask All : Stopped at all times
Applicable time period : For specifying the start and end time in hours and minutes.
Pre-/Post-recording parameter:
[PrePostRecording Frame Rate] : For specifying the JPEG frame rate for FTP pre-/post-recording.
[PrePostRecording Before Trigger] : For setting the FTP pre-recording trigger time (recording time before alarm input) in seconds.
[Setting range: 0 to 60 seconds]
[PrePostRecording After Trigger] : For setting the FTP post-recording trigger time (recording time after alarm input) in seconds.
[Setting range: 0 to 60 seconds]
Memo:
● The maximum time intervals for [PrePostRecording Before Trigger] and [PrePostRecording After Trigger] are determined by the JPEG size on the Encoding page as well as the set values for [PrePostRecording Frame Rate]. A message appears if the combination of the entered values are not feasible.</td></tr>
<tr><td colspan="2">③ Alarm Output</td><td>For setting the alarm output.</td></tr>
<tr><td></td><td>Duration</td><td>For setting the output time of [Manual Output].
[Setting range: 0, 100 msec to 5000 msec]</td></tr>
<tr><td></td><td>Manual Output</td><td>For operating alarm output manually.
The current output status appears on the right. When [Duration] is set to “0”, pressing the [Make] button switches the alarm to Make output, while pressing the [Break] button switches the alarm to Break output.
When [Duration] is set to a value other than “0”, pressing the [Make] button switches the alarm to Make output only during the duration of the output, upon which it switches to Break output.
When the output duration is set to a value other than “0”, pressing the [Break] button switches the alarm to Break output only during the duration of the output, upon which it switches to Make output.</td></tr>
</table>

Setting (continued)

PTZ Page

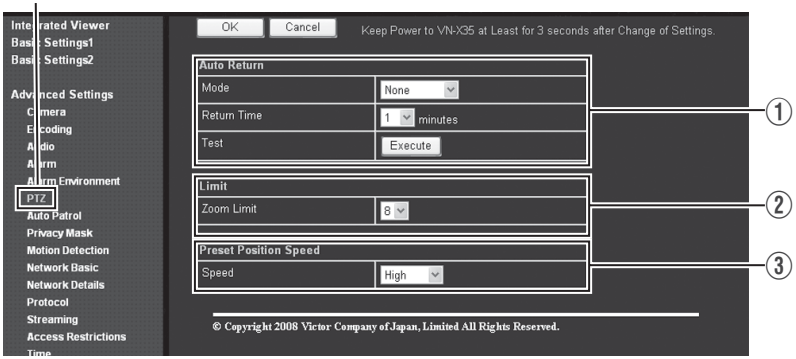
Set the movement for "Auto Return", "Zoom Limit" and "Preset Position".
This page can be used during access using "admin" or "operator"..

- First of all, configure the encoding settings.(☞ Page 39)
- Click [Advanced Settings] to display setting menu.
- Click [PTZ].
- Press the [OK] button to enable the new settings.
- If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.

Note:

- This feature can be used when the distribution size pattern setting on the Encoding page is set to ① (MPEG4 only), ③ (MPEG4 only), ④ (JPEG only), ⑥, or ⑧. (☞ Page 39)

Click



① **Auto Return**		Restores automatically to the state specified under [Mode] when action is not performed on the manually operated camera over the interval specified in [Return Time].
	Mode	For setting the action after Auto Return. None : Auto Return disabled. HOME : Returns to the home position. Auto Patrol: Restores the auto patrol action.
	Return Time	For setting the time interval before restoring the action via Auto return. **[Set values: 1 minutes, 2 minutes, 3 minutes, 5 minutes, 10 minutes, 20 minutes, 30 minutes, 60 minutes]**
	Test	Click [Execute] to perform a test execution of the preset Auto Return action.
② **Limit**		
	Zoom Limit	Set maximum value of electronic zoom feature. **[Set values:1 , 2 , 4 , 8]**
③ **Preset Position Speed**		For adjusting the speed of movement to the Preset Position. This is also applicable to movement to the Preset Position in the Auto Patrol mode.
	Speed	**[Set values:Moment, Low, Mid, High]**

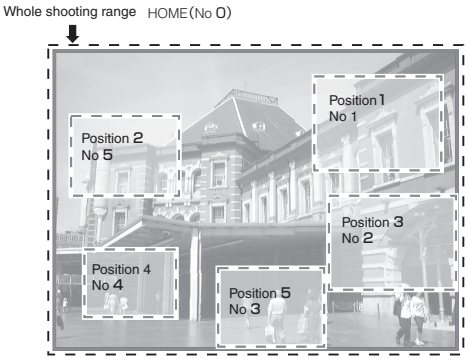
Auto Patrol Page

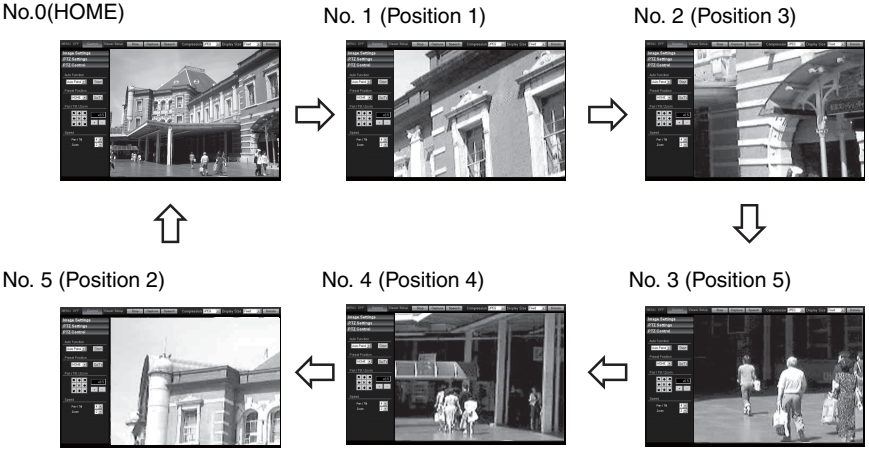
Perform Auto Patrol setting to switch image display between multiple positions according to the interval that has been set.Set when viewing registered positions in order.
This page can be used during access using “admin” or “operator”.

- First of all, configure the encoding settings.(☞ Page 39)
- Click [Advanced Settings] to display setting menu.
- Click [Auto Patrol].
- Register position using PTZ feature.(☞ Page 95)
- Press the [OK] button to enable the new settings.
- If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.

Note:

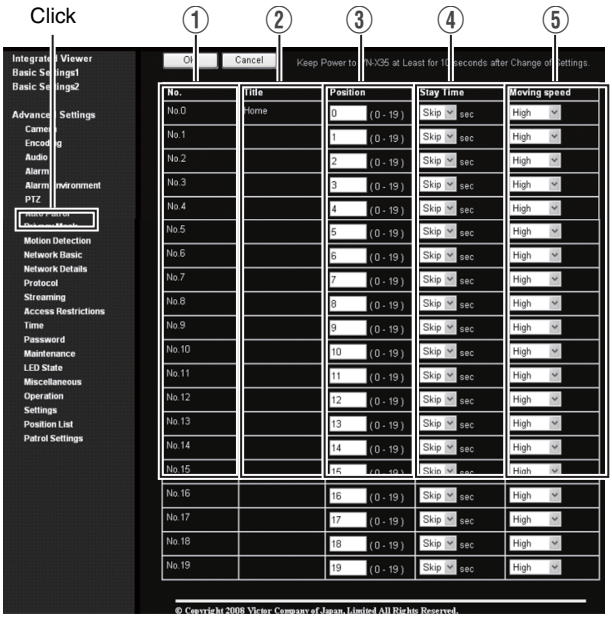
- This feature can be used when the distribution size pattern setting on the Encoding page is set to ① (MPEG4 only), ③ (MPEG4 only), ④ (JPEG only), ⑥, or ⑧. (☞ Page 39)





Setting (continued)

Auto Patrol Page (continued)



① **No.**	Switches the camera images in sequence from No. 0 to No. 19.
② **Title**	Shows the title of the position.
③ **Position**	For setting the sequence of position numbers in which the camera moves. **[Set values : 0 to 19]**
④ **Stay Time**	For setting the time interval for displaying the image of the respective positions. (Unit: seconds) Select Skip for positions that you do not want to display during Auto Patrol. **[Set values :Skip, 10, 20, 30, 45, 60, 120]**
⑤ **Moving speed**	For setting the speed of movement to the said position. **[Set values:Moment, Low, Mid, High]**

Privacy Mask Page

Privacy Mask is a feature that enables masking of a portion of the image.
VN-X35U enables unlimited privacy masks to be specified in different shapes at your favorite locations. The Privacy Mask masks area by uploading a BMP file painted in red (created separately). The displayed color is determined by the color specified on this page.

This page can be used during access using "admin" or "operator".

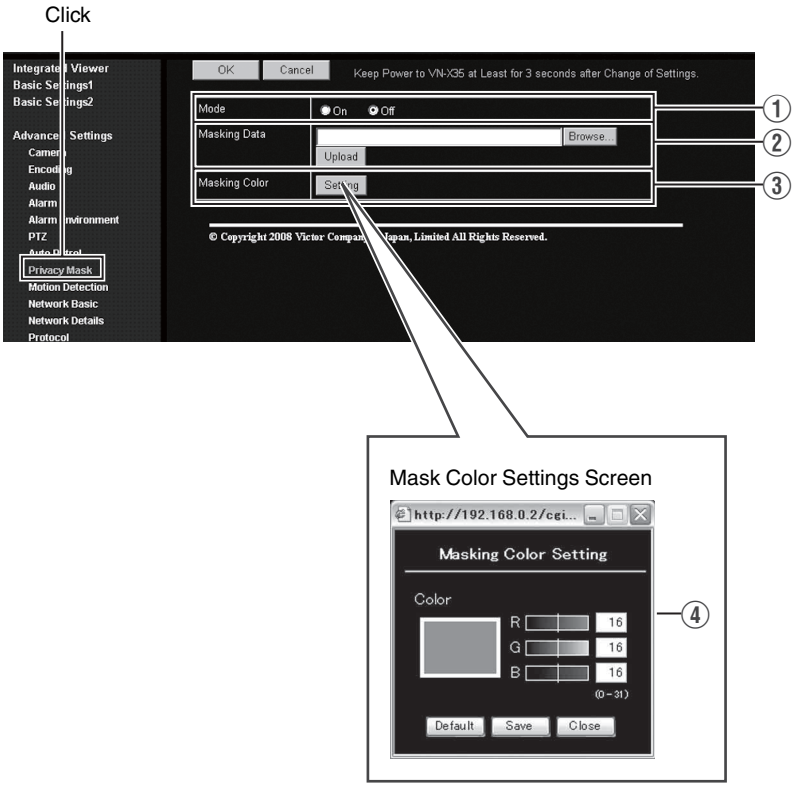
- First of all, configure the encoding settings.(☞ Page 39)
- Click [Advanced Settings] to display setting menu.
- Click [Privacy Mask].
- Press the [OK] button to enable the new settings.
- If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.

Note:

- his feature can be used when the distribution size pattern setting on the Encoding page is set to ② (MPEG4 only), ⑤ (JPEG only), or ⑦. (☞ Page 39)

Memo:

- [Privacy masks cannot be used when [MONITOR OUT] selection switch is set to NTSC or PAL. Set the privacy mask to "Off". After changing the [MONITOR OUT] switch setting, press the [RESET] button for less than 2 seconds to reboot the camera.



Setting (continued)

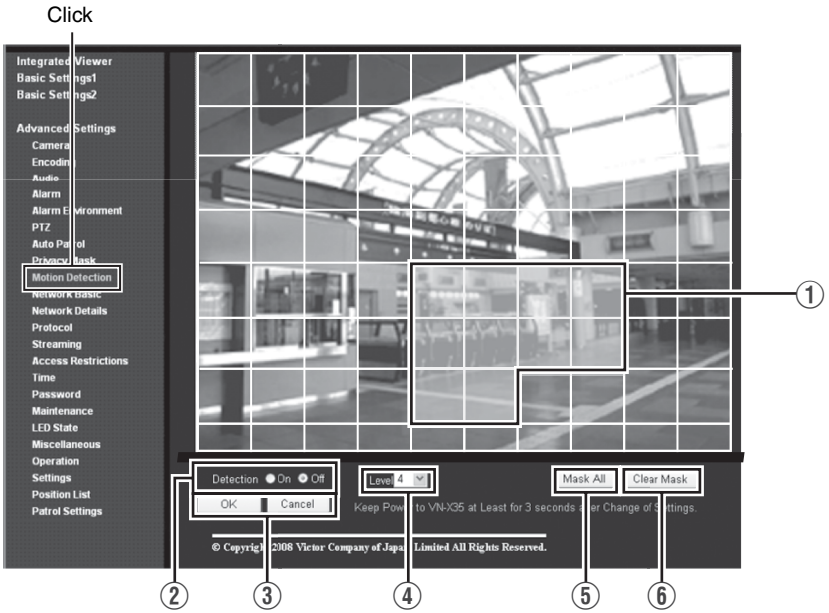
Privacy Mask Page (continued)

① **Mode**	For specifying whether to activate the Privacy Mask feature. When this is set to "On", the privacy mask specified using the following items will appear on the image. **Memo:** ● When MPEG4 is set to the same frame size as JPEG, privacy masks are displayed on both images. ● When MPEG4 is set to a different frame size from JPEG, privacy mask appears only on the QVGA image.
② **Masking Data**	Get ready the BMP file (Quad VGA, VGA or QVGA size) for specifying the position and shape of the privacy mask on the computer in advance. (Refer to the following for procedures to create the BMP file.) Press the [Browse...] button to display the file selection screen. Select the BMP file in the PC. Press the [Upload] button to upload the selected BMP file to VN-X35U. **Creating the BMP file** **1.** Upon installing the camera, use JPEG Viewer to save the JPEG file on the computer. (JPEG Viewer: ☞ Page 82) **2.** Open the saved JPEG file on the computer using the Paint tool, and paint the area to be masked in red ((R, G, B) = (255, 0, 0)). **3.** Save this image as a BMP file (24 bits).
③ **Masking Color**	Press the [Settings] button to display the Masking Color Setting screen. You can alter the color of the privacy mask.
④ **Masking Color Setting**	For specifying the color ratio in the red:green:blue format. Press the [Save] button to set the selected color as the mask color. Press the [Default] button to restore the default mask color settings.

Motion Detection Page

This page is for setting motion detection.
This page can be used during access using “admin” or “operator”.

- Click [Advanced Settings] to display setting menu.
- Click [Motion detection].
- The area valid for motion detection is displayed in blue.
- When motion is detected, the frame of Built-in Viewer turns red.



Setting (continued)

Motion Detection Page (continued)

① **Display Screen**	The screen is divided into blocks of 10 (horizontal) x 8 (vertical). Use this to set whether to mask each block. All blocks are masked in the default setting. The block turns blue when it is clicked, indicating that it is unmasked. Click again to return to the masked state. Press the [OK] button to enable this setting. Use the [Mask All] button to mask all blocks. Use the [Clear Mask] button to unmask all blocks.
② **Detection**	For setting motion detection to On/Off. Press the [OK] button to enable this setting. **Memo:** ● Even though motion detection is set to "On", the motion of masked blocks cannot be detected.
③ **OK/Cancel**	To apply the new parameters, press the [OK] button. Press the [Cancel] button to cancel the change.
④ **Level**	For setting the sensitivity of motion detection. Increasing the number raises the detection sensitivity level, and hence it is more sensitive. Press the [OK] button to enable this setting.
⑤ **Mask All**	Masks all blocks. Press the [OK] button to enable this setting.
⑥ **Clear Mask**	Unmasks all blocks and enables the current motion detection and detection sensitivity settings. Press the [OK] button to enable this setting.

Memo:

- The area display position serves as a reference. Make sure to perform operation check.
- The screen is divided into blocks of 80 (10 horizontal x 8 vertical).
  Set the angle of view such that the size of the object for which motion is to be detected is larger than the size of multiple blocks.

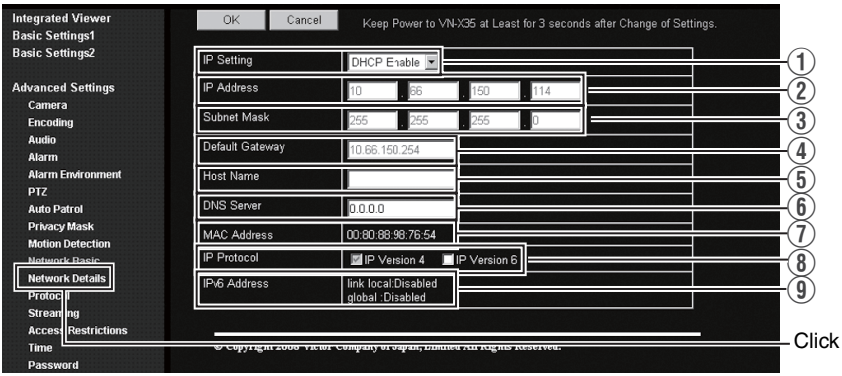
Note:

- Flickers of fluorescent lamps may cause motion detection.
- Changes in brightness due to the light source may be detected as motion.
- Plugging/Unplugging the infrared ray filter in black-and-white mode may cause motion detection .
- The motion detection feature is not intended to prevent theft or fire. This feature may not function properly depending on the conditions of the object and settings.
  Our company shall not be liable for any accident or damage that occurs.
- When images on VN-X35U are currently acquired by another client or Built-in Veiwer, video images may not appear on the [Motion Detection] page due to the maximum distribution limit of VN-X35U. Stop other clients or Built-in Veiwer before using the [Motion Detection] page.

Network Basic Page

This page is for performing basic setting related to the network.
This page can be used during access using "admin".

- Click [Advanced Settings] to display setting menu.
- Click [Network Basic].
- Press the [OK] button to enable the new settings.
- If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.
- When settings of the Basic page is changed, all services that are currently running will end immediately. For example, when changes are made to the Basic page during JPEG/MPEG4 distribution, distribution will be discontinued and TCP will be disconnected.



① **IP Setting**	For setting the DHCP client function. Connect VN-X35U to a network environment with a DHCP server when DHCP is to be enabled. If the DHCP server does not exist when DHCP is set to "Enable", VN-X35U will start running with the 192.168.0.2 IP address and 255.255.255.0 subnet mask in about 2 minutes after startup. Refer to "IP Address Settings" (☞ Page 27) for the IP address.
② **IP Address**	For setting the IP address of VN-X35U.
③ **Subnet Mask**	For setting the subnet mask of VN-X35U.
④ **Default Gateway**	For setting the default gateway of VN-X35U. Set as 0.0.0.0 when a default gateway is not set.
⑤ **Host Name**	For setting the host name of VN-X35U. Specify a name using alphanumeric characters, hyphen (-) or period (.). Underscores (_) cannot be used.
⑥ **DNS Server**	For setting the address of the DNS server.
⑦ **MAC Address**	The MAC address of VN-X35U is displayed in a hexadecimal number.
⑧ **IP Protocol**	For setting IPv6 to On or Off. (IPv4 is set to On at all times.) When IPv6 is set to On in a network that supports IPv6, the address appears in the [IPv6 Address] field. If the network does not support IPv6, "Disable" appears in the [IPv6 Address] field.VN-X35U will restart if this item is altered.
⑨ **IPv6 Address**	Displays the IPv6 address.

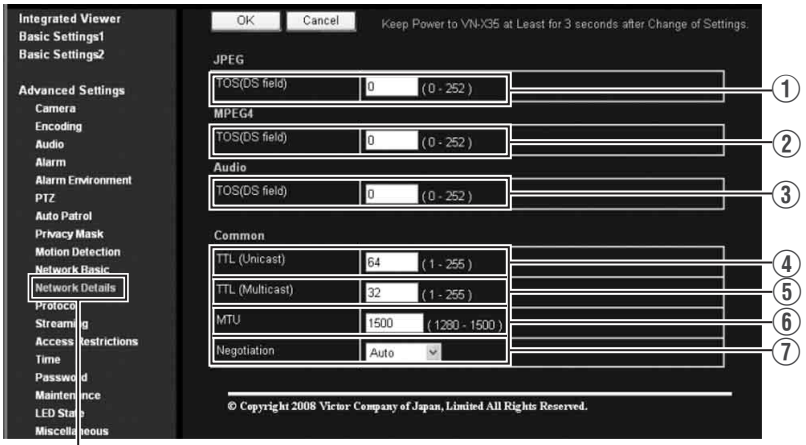
Setting (continued)

Network Details Page

This page is for performing detailed network setting.

This page can be used during access using “admin”.

- Click [Advanced Settings] to display setting menu.
- Click [Network Details].
- Press the [OK] button to enable the new settings.
- If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.



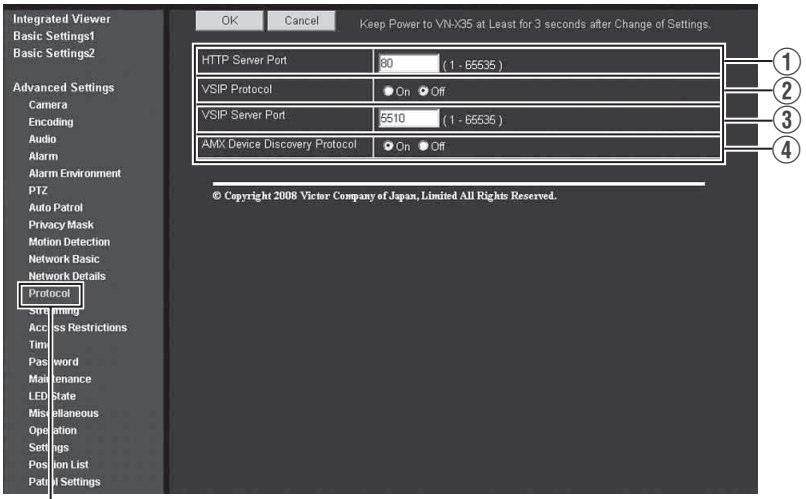
Click

① **JPEG TOS(DS field)**	For setting the TOS value of IP packets in which JPEG is stored. The upper six bits out of the eight bits that make up the TOS value belong to DSCP. This upper six bits can be set. The lower two bits are “0”. For example, upon setting to “255”, the lower two bits are converted to “0”, and the value becomes “252”. TOS values are used in networks that support QoS. By setting QoS for the network switch, routing can be done by giving priority to packets with a larger TOS value.
② **MPEG4 TOS(DS field)**	For setting the TOS value of IP packets in which MPEG4 is stored. For details, refer to the [JPEG TOS(DS field)] item above.
③ **Audio TOS(DS field)**	For setting the TOS value of IP packets in which Audio is stored. For details, refer to the [JPEG TOS(DS field)] item above.
④ **TTL(Unicast)**	For setting the TTL value of JPEG/MPEG4 packets that are to be sent via TCP.
⑤ **TTL(Multicast)**	For setting the TTL value of JPEG/MPEG4 packets that are to be sent via multicast.
⑥ **MTU**	For setting the maximum packet size for storing JPEG/MPEG4. **[Setting range: 1280 to 1500]**
⑦ **Negotiation**	For setting the negotiation of the network. When a value other than “Auto” is selected, do not set the network device to be connected to “Auto”. Ensure that it is set to the same value as VN-X35U.

Protocol Page

This page is for changing the HTTP server port number.
This page can be used during access using “admin”.

- Click [Advanced Settings] to display setting menu.
- Click [Protocol].
- Press the [OK] button to enable the new settings.
- After changing, you will need to re-establish the connection if you are using the Internet Explorer.



Click

① **HTTP Server Port**	You can change the port number for the built-in web server of VN-X35U. (1 to 65535: The default port number setting is 80.) The JPEG and MPEG4 HTTP port number for the web server will also be changed. During access to VN-X35U from the Internet Explorer, enter the following in the Internet Explorer when the camera is in its default settings. http://192.168.0.2 If the port number is changed to 8080, for example, enter the Internet Explorer as follows. http://192.168.0.2:8080
② **VISIP Protocol**	For setting VSIP to On/Off. Set to “On” if you want to use this unit from Verint's Nextiva products.
③ **VISIP Server Port**	For changing the built-in VSIP number of VN-X35U. (1 to 65535: Default value is 5510)
④ **AMX Device Discovery Protocol**	For setting AMX Device Discovery Protocol to On or Off. Set to “On” when you are using VN-X35U on AMX's systems. **[Set values : On, Off]**

Memo:

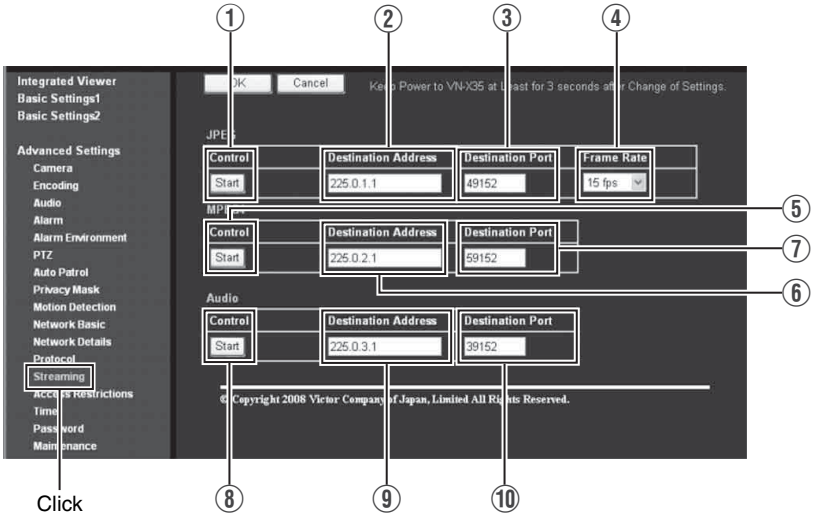
- If Built-in Viewer is used for playback, change the HTTP port number in the setting screen of Built-in Viewer to the same value.

Setting (continued)

Streaming Page

This page is for setting manual multicast transmission.
This page can be used during access using “admin” or “operator”.

- Click [Advanced Settings] to display setting menu.
- Click [Streaming].
- Press the [OK] button to enable the new settings.
- If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.



JPEG	
① **Control**	For starting or stopping streaming of JPEG images. Parameters that are set on the [Streaming] page will be saved when transmission is started upon pressing the [Start] button.
② **Destination Address**	For specifying the destination address of JPEG streaming. Specify the multicast address. When other devices that make use of multicast transmission exist, ensure that each of them is set to a different multicast address.
③ **Destination Port**	For specifying the destination port number of JPEG streaming. Specify an even number for RTP compliance. When other devices that make use of multicast transmission exist, it is recommended that each of them be set to a different port number. Multiple multicast streams cannot be received on a single computer when there are duplicate port numbers.
④ **Frame Rate**	For specifying the frame rate when sending JPEG images via multicast.
MPEG4	
⑤ **Control**	For starting or stopping streaming of MPEG4 images. Parameters that are set on the [Streaming] page will be saved when transmission is started upon pressing the [Start] button.
⑥ **Destination Address**	For specifying the destination address for MPEG4 streaming. Specify the multicast address. When other devices that make use of multicast transmission exist, ensure that each of them is set to a different multicast address.
⑦ **Destination Port**	For specifying the destination port number for MPEG4 streaming. Specify an even number for RTP compliance. When other devices that make use of multicast transmission exist, it is recommended that each of them be set to a different port number. Multiple multicast streams cannot be received on a single computer when there are duplicate port numbers.
Audio	
⑧ **Control**	For starting or stopping streaming of audio. Parameters that are set on the [Streaming] page will be saved when transmission is started upon pressing the [Start] button.
⑨ **Destination Address**	For specifying the destination address of audio streaming. Specify the multicast address. When other devices that make use of multicast transmission exist, ensure that each of them is set to a different multicast address.
⑩ **Destination Port**	For specifying the destination port number of audio streaming. Specify an even number for RTP compliance. When other devices that make use of multicast transmission exist, it is recommended that each of them be set to a different port number. Multiple multicast streams cannot be received on a single computer when there are duplicate port numbers.

Memo:

- When the power of VN-X35U shuts down accidentally during multicast transmission, multicast transmission will restart automatically after VN-X35U is rebooted.

Setting (continued)

Access Restrictions Page

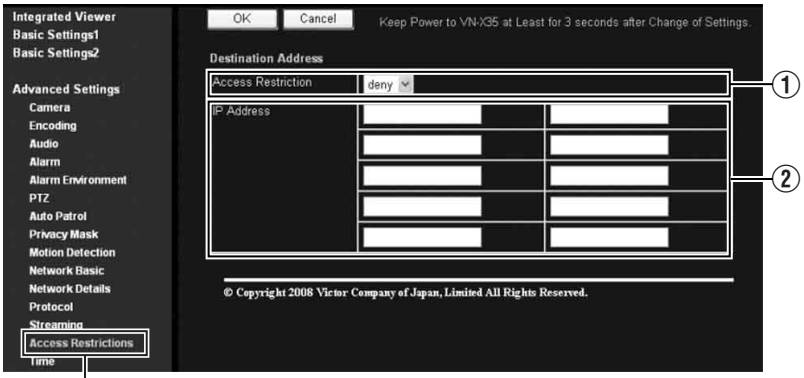
This page is for setting client restrictions.

This page can be used during access using “admin”.

- Click [Advanced Settings] to display setting menu.
- Click [Access Restrictions].
- Press the [OK] button to enable the new settings.
- If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.
- This feature is targeted at JPEG/MPEG4 acquisition. It does not impose restrictions on access via a web browser or use of API.

Note:

- The Access Restriction feature determines whether to impose restrictions during TCP connection by the client. In the case when access restriction is set after TCP connection by a client has been established, TCP connection will not be disconnected.



Destination Address		Restrictions may be imposed on clients accessing VN-X35U using the IP address.
	① **Access Restrictions**	When “deny” is selected, acquisition of JPEG/MPEG4 via the IP address specified for the [IP Address] item will be denied. Restrictions are not imposed on access to the Web Settings page. When “allow” is selected, acquisition of JPEG/MPEG4 via the IP address specified for the [IP Address] item will be permitted. Restrictions are not imposed on access to the Web Settings page.
	② **IP Address**	When a multicast address is specified and “deny” is selected, VN-X35U will deny transmission to this multicast address. When a multicast address is specified and “allow” is selected, VN-X35U will only accept transmission to this multicast address and deny transmission to multicast addresses that are not stated in the [IP Address] field.

Note:

- Note that when “allow” is selected and all IP address fields are left blank, JPEG/MPEG4 acquisition by all IP addresses will be denied.
  Restrictions are not imposed on access to the Web Settings page.
  Additionally, VN-X35U will also deny access when instructions for transmission to the specified IP address are sent via API.

Memo:

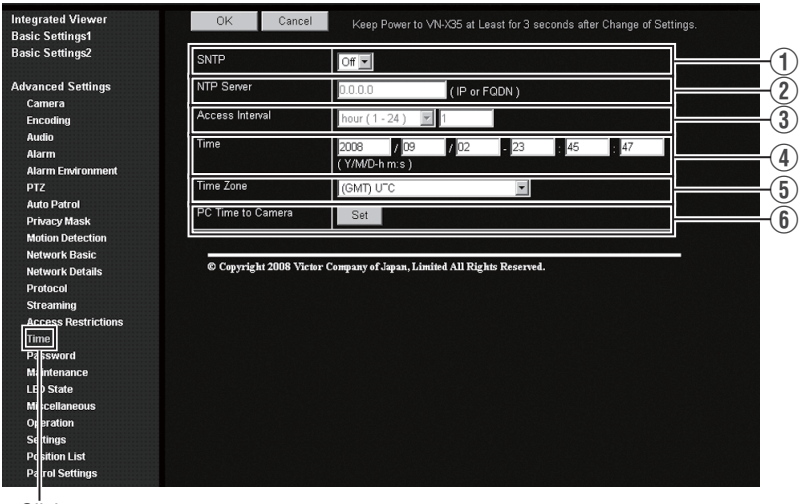
- To specify a specific IP address range, enter a combination of the IP address and subnet mask in the [IP Address] field.
- Define the subnet mask using a length between 8 to 30 bits.
  For example, a range between 192.168.0.0 to 192.168.0.255 is denoted as 192.168.0.0/24 ([IP Address]/[bit length of subnet mask]).

Setting (continued)

Time Page

This page is for setting time.
This page can be used during access using “admin”.

- Click [Advanced Settings] to display setting menu.
- Click [Time].
- Press the [OK] button to enable the new settings.
- If the [OK] button is pressed upon entering an invalid value, a warning message will appear and the entry will be denied. Press the [Cancel] button to restore the invalid entry to the current value.



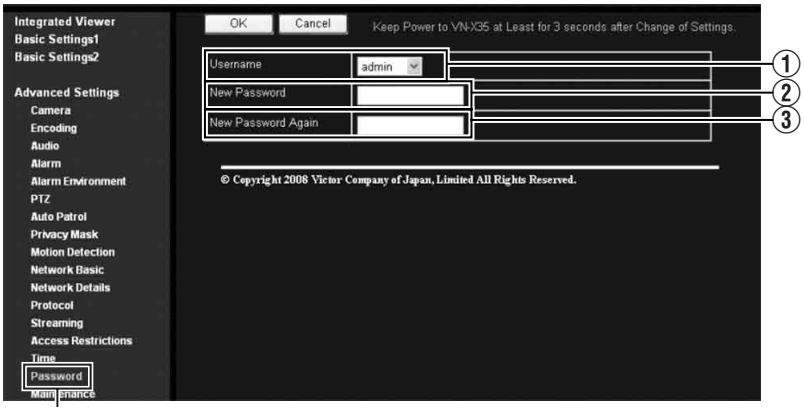
Click

① **SNTP**	For setting the SNTP client feature. When this is set to “On”, the system accesses the specified NTP server at regular intervals to acquire the time. In addition, time will be recorded in the JPEG headers distributed by VN-X35U. Discontinuity in JPEG header’s time may occur immediately before and after acquiring time from the NTP server.
② **NTP Server**	For setting the IP address of the NTP server.
③ **Access Interval**	For setting the time interval for access to the NTP server.
④ **Time**	Displays the time on the clock of VN-X35U. The clock time can be changed by entering an appropriate value. (Second value cannot be specified.) In addition, time will be recorded in the JPEG headers distributed by VN-X35U. Discontinuity may occur in the JPEG header’s time immediately before and after changing the time.
⑤ **Time Zone**	For setting the time zone.
⑥ **Pc time to Camera**	Click [Set] to load the clock time of the computer in use on the camera.

Password Page

This page is for setting the password.
This page can be used during access using “admin”.

- Click [Advanced Settings] to display setting menu.
- Click [Password].
- Press the [OK] button to enable the new settings.



① **Username**	Select a user name.
② **New Password**	Enter a new password. Passwords shall be at least 4 characters and not longer than 8 characters. VN-X35U is case sensitive.
③ **New Password Again**	Enter again to confirm the new password.

Note:

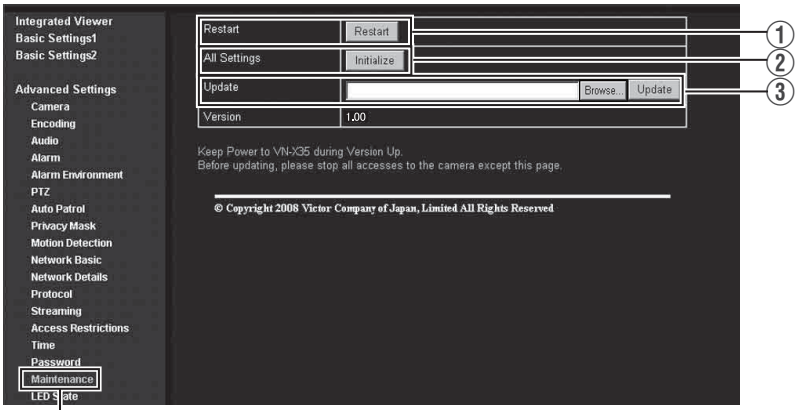
- Be sure to handle the password carefully in case you forget it.
- In the event that you forget the password, please consult JVC’s servicing center.

Setting (continued)

Maintenance Page

This page is for maintenance purposes.
This page can be used during access using “admin”.

- Click [Advanced Settings] to display setting menu.
- Click [Maintenance].

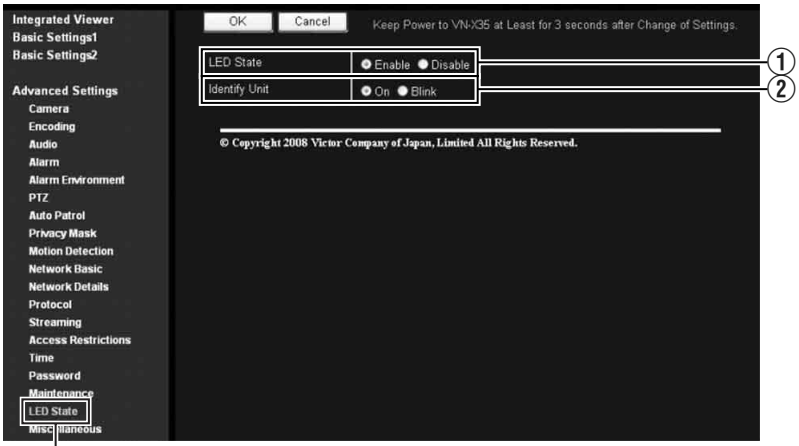


① **Restart**	Restarts the camera. (It takes about one minute for the camera to restart.)
② **All Settings** “Initialize”	Restores all settings to their default values and reboots the unit. (It takes about one minute for the camera to initialize and reboot.) Passwords will also be initialized. The built-in clock of VN-X35U will not be affected. JPEG/MPEG4 transmission and all others services that are running will be discontinued.
③ **Update**	Upgrades the firmware version of VN-X35U and reboots the unit. The settings of VN-X35U will be saved. Copy the new firmware file to the computer on which Internet Explorer is used, and specify this file using the [Browse...] button. Press the [Update] button to start the update. JPEG/MPEG4 transmission and all others services that are running will be discontinued. The update process may take several minutes. A message will be displayed on the Internet Explorer when update is successfully completed. **Note:** ● Do not turn off the power when update is in progress or during reboot after update is complete. Turning off the power of the camera may cause it to malfunction. ● Before update, end the accesses to “VN-X35U” from pages other than this page (Built-in Viewer etc). If update is started while accesses other than this page are valid, access to this page might be cut off. In that case, end the accesses other than this page, access to this page again to redo the update.

LED State Page

This page is for setting the method for lighting the [STATUS] indicator at the side of VN-X35U.
This page can be used during access using “admin” or “operator”.

- Click [Advanced Settings] to display setting menu.
- Click [LED State].
- Press the [OK] button to enable the new settings.



① **LED State**	For selecting whether to light up the [STATUS] indicator of this unit when it is running. Enable : Lights up when unit is running. Disable : Turns off the indicator after startup is complete.
② **Identify Unit**	If you want the [STATUS] indicator to blink such as during visual check of the camera currently being configured from the computer, set this item to “Blink”. **Memo:** ● The light of the indicator remains off if the LED State is set to “Disable”.

Setting (continued)

List of Factory Settings of Each Page

■ **Camera Page(☞ Page 41)**

Item	Factory Settings
Camera ID	VN-X35U
Monitor Type	Custom
Black Level	1
Gamma	0
Enhance Frequency	High
Enhance Level	0
Color Level	0
AGC	High
Sense Up	x2 (1/7.5s)
ALC Priority	Motion
Shutter Speed	Auto(1/15 - 1/100)
Easy Day and Night	Color
EV Compensation	0
White Balance	ATW
Back Light Compensation	Off

■ **Encoding Page(☞ Page 47)**

Item	Factory Settings
Frame Size	Quad VGA/VGA Digital PTZ (MPEG4 only)
JPEG Quality	VFS5
MENU ONMPEG4 Bitrate	2000 kbps
MPEG4 Bitrate Control	CBR
MPEG4 FPS	15 fps
MPEG4 I Frame Interval	30
MPEG4 Priority	FPS

■ **Audio Page (☞ Page 49)**

Item	Factory Settings
Duplex Mode	Half Duplex
Mike GainMENU OFF	32 dB
Mike Power Supply	On
Audio File 1	—
Audio File 2	—
Audio File 3	—
Audio File 4	—
Audio File 5	—

■ **Alarm Page(☞ Page 51)**

Item	Factory Settings
Action	Disable
1st Trigger	Input 1 Make
Max. Interval	—
2nd Trigger	Off
Action Position No.	—
Audio File	—
Trigger Position No.	—
Mail Address	—
Mail Text	—
Attach Image	Off
TCP/UDP IP Address	—
TCP/UDP Port Number	—
TCP/UDP Data	—
Alarm Output Duration	—
Time Filter	Unmask All

■ Alarm Environment Page(☞ Page 54)

Item	Factory Settings
SMTP Server	0.0.0.0
Port Number	25
Send Mail Address	—
POP before SMTP	Off
POP Server	0.0.0.0
Port Number	110
Username	—
	—
FTP Server	0.0.0.0
Directory	—
Username	—
	—
Periodic FTP	Off
Periodic FTP Interval	1
Periodic FTP Naming	Auto
Periodic FTP Time Filter	Unmask All
PrePostRecording Frame Rate	15 fps
PrePostRecording Before Trigger	5 sec
PrePostRecording After Trigger	5 sec
Duration Output 1	1000 msec
Duration Output 2	1000 msec
Manual Output 1	Break
Manual Output 2	Break

■ PTZ Page(☞ Page 58)

Item	Factory Settings
Mode	None
Return Time	1
Zoom Limit	8
Speed	Moment

■ Auto Patrol Page(☞ Page 59)

tem	Factory Settings
Position	0 to 19
Stay Time	Skip
Moving speed	**Moment**

■ Privacy Mask Page(☞ Page 61)

Item	Factory Settings
Mode	Off
Masking Color Setting	16 (R, G, B)

■ Motion Detection Page(☞ Page 63)

Item	Factory Settings
Detection	Off
Level	4

■ Network Basic Page(☞ Page 65)

Item	Factory Settings
IP Setting	DHCP Enable
IP Address	192.168.0.2
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Host Name	—
DNS Server	0.0.0.0
IP Protocol	IP version 4 : On IP version 6 : Off
IPv6 Address	Disable

Setting (continued)

List of Factory Settings of Each Page (continued)

■ **Network Details Page(☞ Page 66)**

Item	Factory Settings
JPEG TOS	0
MPEG4 TOS	0
Audio TOS	0
TTL(Unicast)	64
TTL(Multicast)	32
MTU	1500
Negotiation	Auto

■ **Protocol Page(☞ Page 67)**

Item	Factory Settings
HTTP Server Port	80
VISIP Protocol	Off
VISIP Server Port	5510
AMX Device Discovery Protocol	On

■ **Streaming Page(☞ Page 68)**

Item	Factory Settings
JPEG Destination Address	225.0.1.1
JPEG Destination Port	49152
JPEG Frame Rate	15 fps
MPEG4 Destination Address	225.0.2.1
MPEG4 Destination Port	59152
Audio Destination Address	225.0.3.1
Audio Destination Port	39152

■ **Access Restrictions Page (☞ Page 70)**

Item	Factory Settings
Access Restrictions	deny
IP Address	—

■ **Time Page(☞ Page 72)**

Item	Factory Settings
SNTP	Off
NTP Server	0.0.0.0
Access Interval	hour, 1
Time Zone	(GMT) UTC

■ **Password Page(☞ Page 73)**

Item	Factory Settings
Username	“admin”
New Password	Blank Default passwords are: “admin” : jvc “operator” : jvc “user” : jvc

■ **LED Settings Page(☞ Page 75)**

Item	Factory Settings
LED State	Enable
Identify Unit	On

Miscellaneous Page

This page is for acquiring information.
This page can be used during access using “admin”, “operator” and “user”.

- Click [Advanced Settings] to display setting menu.
- Click [Miscellaneous].

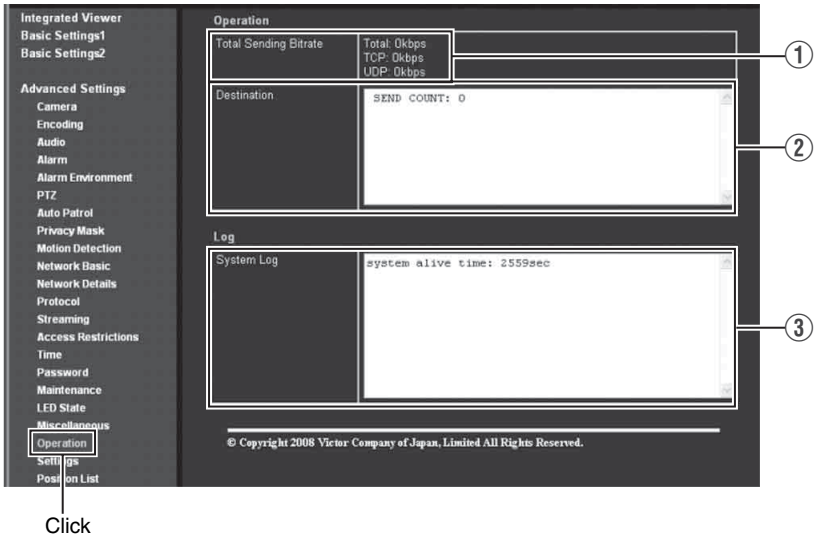
① **Open Source Software**	Press the [Show] button to display information of the software used by VN-X35U.

Setting (continued)

Operation Page

Displays the operating status of VN-X35U.
This page can be used during access using “admin” or “operator”.

- Click [Advanced Settings] to display setting menu.
- Click [Operation].

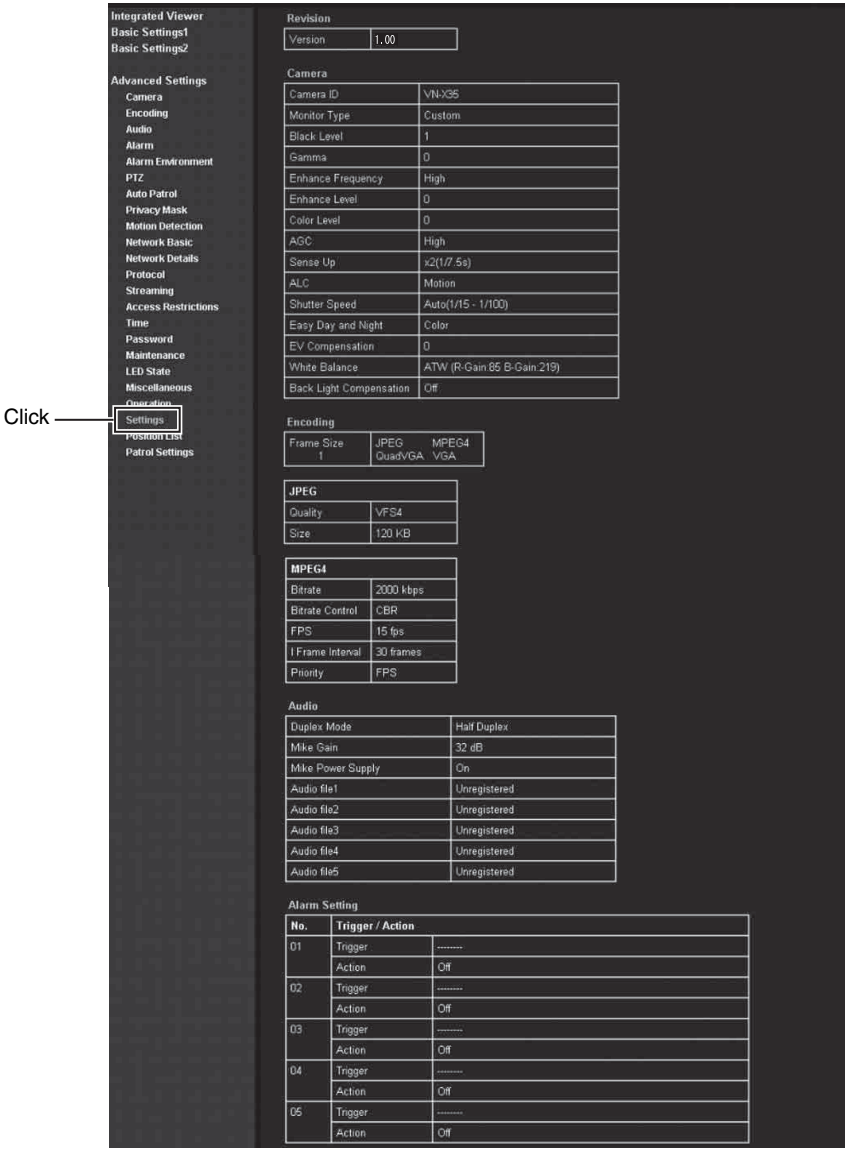


① **Total Sending Bitrate**	Displays the total TCP/UDP bit rate sent by VN-X35U as well as the individual bit rates.
② **Destination**	Displays the destination that VN-X35U is sending data to.
③ **System Log**	Displays the following information. ● Number of seconds after startup ● Alarm information

Settings Page

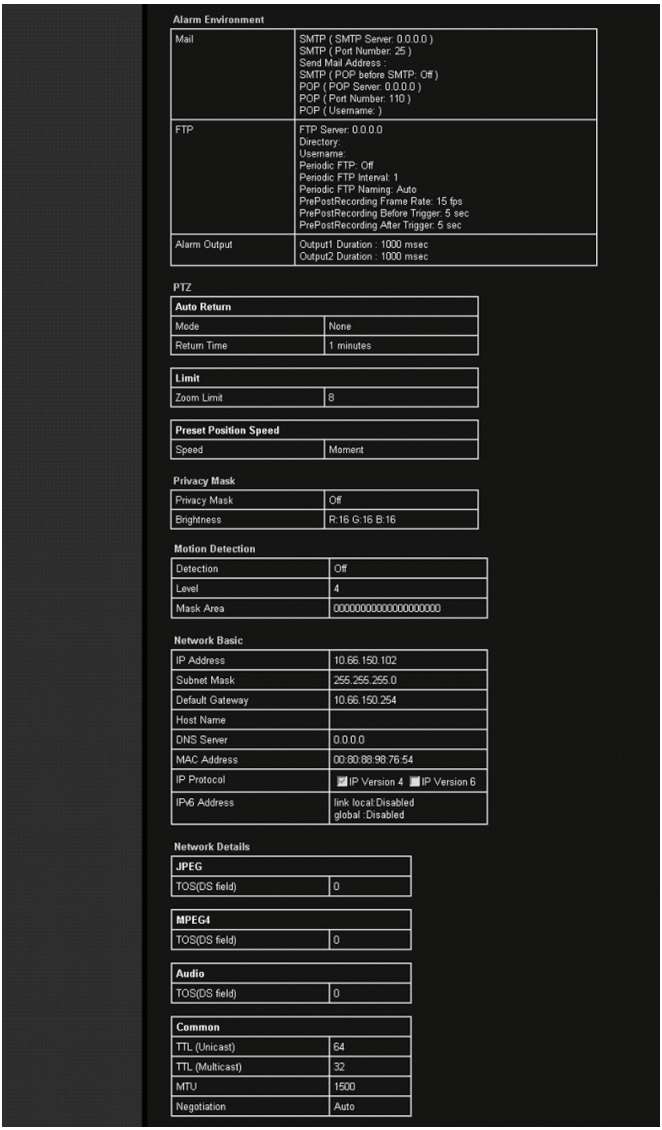
Display the version information and current settings of VN-X35U.
This page can be used during access using “admin” or “operator”.

- Click [Advanced Settings] to display setting menu.
- Click [Settings].



Setting (continued)

Settings Page (continued)



Alarm Environment

Mail	SMTP (SMTP Server: 0.0.0.0) SMTP (Port Number: 25) Send Mail Address : SMTP (POP before SMTP: Off) POP (POP Server: 0.0.0.0) POP (Port Number: 110) POP (Username:)
FTP	FTP Server: 0.0.0.0 Directory: Username: Periodic FTP: Off Periodic FTP Interval: 1 Periodic FTP Naming: Auto PrePostRecording Frame Rate: 15 fps PrePostRecording Before Trigger: 5 sec PrePostRecording After Trigger: 5 sec
Alarm Output	Output1 Duration : 1000 msec Output2 Duration : 1000 msec

PTZ

Auto Return	
Mode	None
Return Time	1 minutes

Limit	
Zoom Limit	8

Preset Position Speed	
Speed	Moment

Privacy Mask

Privacy Mask	Off
Brightness	R:16 G:16 B:16

Motion Detection

Detection	Off
Level	4
Mask Area	0000000000000000000

Network Basic

IP Address	10.66.150.102
Subnet Mask	255.255.255.0
Default Gateway	10.66.150.254
Host Name	
DNS Server	0.0.0.0
MAC Address	00:80:88:98:76:54
IP Protocol	☑ IP Version 4 ☐ IP Version 6
IPv6 Address	link local:Disabled global :Disabled

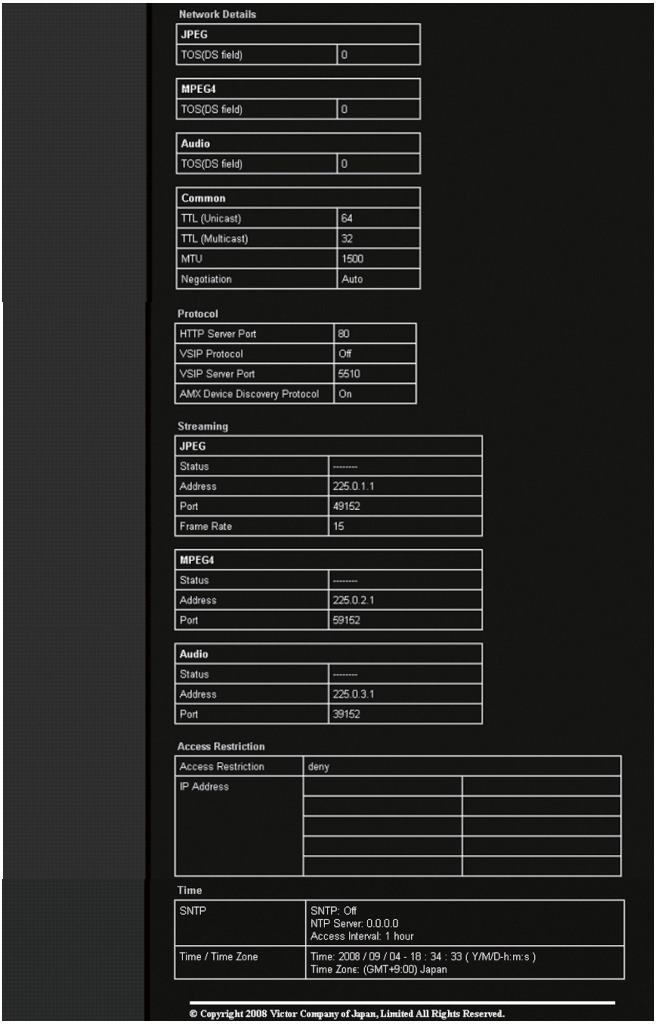
Network Details

JPEG	
TOS(DS field)	0

MPEG4	
TOS(DS field)	0

Audio	
TOS(DS field)	0

Common	
TTL (Unicast)	64
TTL (Multicast)	32
MTU	1500
Negotiation	Auto



Network Details

JPEG	
TOS(DS field)	0

MPEG4	
TOS(DS field)	0

Audio	
TOS(DS field)	0

Common	
TTL (Unicast)	64
TTL (Multicast)	32
MTU	1500
Negotiation	Auto

Protocol

HTTP Server Port	80
VSIP Protocol	Off
VSIP Server Port	5510
AMX Device Discovery Protocol	On

Streaming

JPEG	
Status	--------
Address	225.0.1.1
Port	49152
Frame Rate	15

MPEG4	
Status	--------
Address	225.0.2.1
Port	59152

Audio	
Status	--------
Address	225.0.3.1
Port	39152

Access Restriction

Access Restriction	deny	
IP Address		

Time

SNTP	SNTP: Off NTP Server: 0.0.0.0 Access Interval: 1 hour
Time / Time Zone	Time: 2008 / 09 / 04 - 18 : 34 : 33 (Y/M/D-h:m:s) Time Zone: (GMT+9:00) Japan

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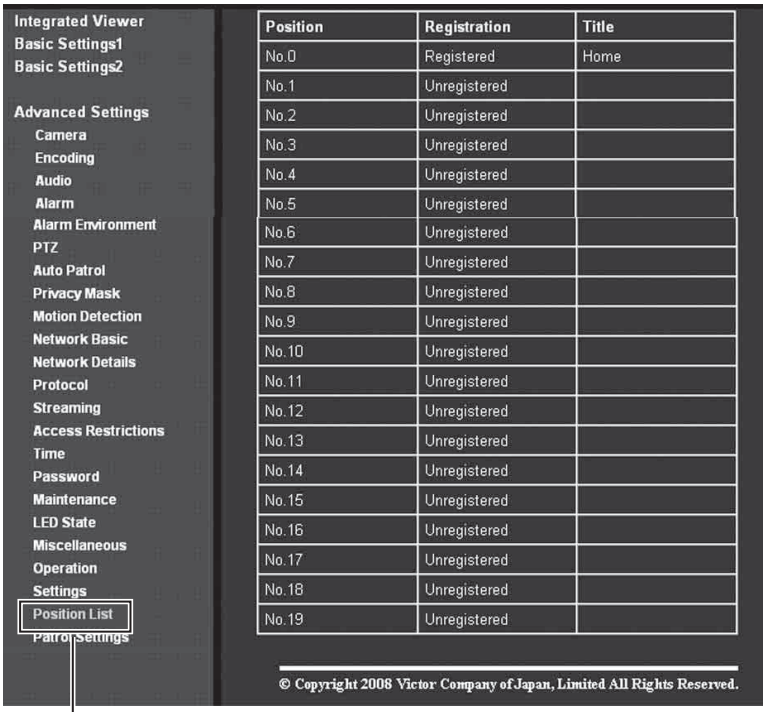
Setting (continued)

Position List

The Position List displays information on the preset positions.
This page can be used during access using “admin” or “operator”.

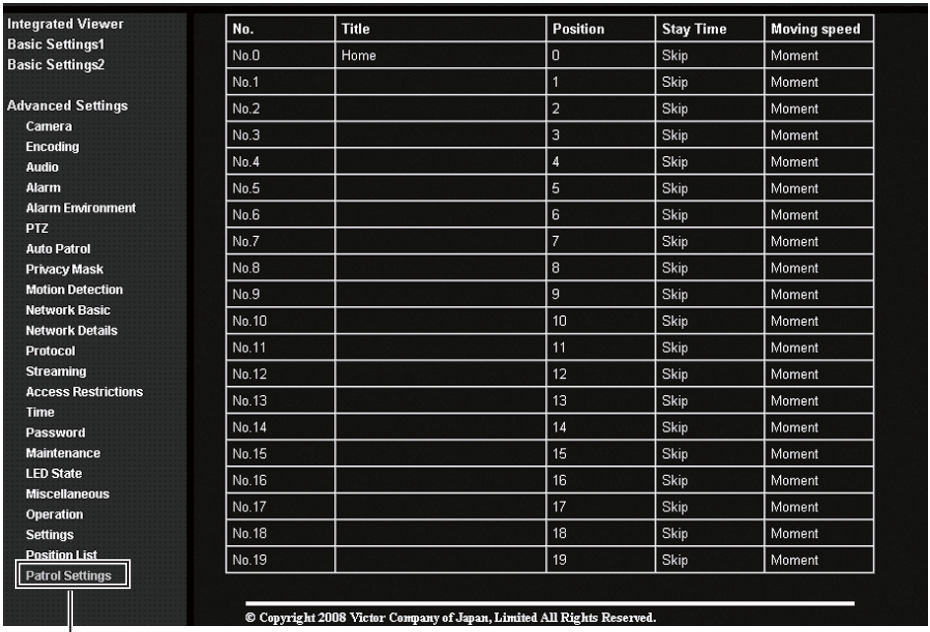
- Click [Advanced Settings] to display setting menu.
- Click [Position List].



Patrol Infomation

Patrol Information displays the Auto Patrol information and settings.
This page can be used during access using “admin” or “operator”.

- Click [Advanced Settings] to display setting menu.
- Click [Patrol Infomation].


Integrated Viewer
Basic Settings1
Basic Settings2
Advanced Settings
Camera
Encoding
Audio
Alarm
Alarm Environment
PTZ
Auto Patrol
Privacy Mask
Motion Detection
Network Basic
Network Details
Protocol
Streaming
Access Restrictions
Time
Password
Maintenance
LED State
Miscellaneous
Operation
Settings
Position List
Patrol Settings
No. | Title | Position | Stay Time | Moving speed
No.0 | Home | 0 | Skip | Moment
No.1 | | 1 | Skip | Moment
No.2 | | 2 | Skip | Moment
No.3 | | 3 | Skip | Moment
No.4 | | 4 | Skip | Moment
No.5 | | 5 | Skip | Moment
No.6 | | 6 | Skip | Moment
No.7 | | 7 | Skip | Moment
No.8 | | 8 | Skip | Moment
No.9 | | 9 | Skip | Moment
No.10 | | 10 | Skip | Moment
No.11 | | 11 | Skip | Moment
No.12 | | 12 | Skip | Moment
No.13 | | 13 | Skip | Moment
No.14 | | 14 | Skip | Moment
No.15 | | 15 | Skip | Moment
No.16 | | 16 | Skip | Moment
No.17 | | 17 | Skip | Moment
No.18 | | 18 | Skip | Moment
No.19 | | 19 | Skip | Moment
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Click

Operation of Built-in Viewer

VN-X35U comes equipped with an integrated viewer.
You can start up Built-in Viewer by entering the IP address in the Internet Explorer.
Built-in Viewer enables you to performing monitoring using JPEG or MPEG4 images, audio transmission, and PTZ operations.

■ Using the compressed JPEG format enables display of a series of still images as well as one-shot recording of still images.

■ Using the compressed MPEG4 format enables display of MPEG4-encoded motion images.

■ You can send or receive audio using the JPEG/MPEG4 Viewer.

♦ "Internet Explorer Setup" (☞ Page 86)
♦ "Installing Built-in Viewer" (☞ Page 88)
♦ "Image quality setting" (☞ Page 92)
♦ "PTZ setting" (☞ Page 94)
♦ "PTZ Control" (☞ Page 96)
♦ "JPEG Viewer Settings" (☞ Page 98)
♦ "MPEG4 Viewer Settings" (☞ Page 100)
♦ "Audio Monitor Settings" (☞ Page 102)
♦ "Exiting the Viewer" (☞ Page 105)

When the display or configuration of the opened screen appears strange, check using the following procedures.

① Click [Start]–[Control Panel]–[Display] and open the [Display Properties] window

② Click the [Settings] tab in the [Display Properties] windows and click the button

③ Check that [DPI setting] in the [General] tab has become [Normal size(96DPI)]

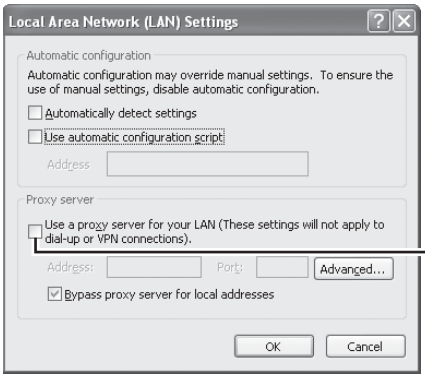
④ Otherwise, change the setting to [Normal size(96DPI)] andreboot windows

Internet Explorer Setup

1. Launch the Internet Explorer on the computer

2. When proxy settings are enabled in the Internet Explorer, follow the steps below to disable the proxy of the Internet Explorer

- Select in the order of [Tool]-[Internet Options]-[Connections]-[LAN Setting], followed by deselecting the check for "Use a proxy server for your LAN" under [Proxy Server] in the [Local Area Network (LAN) Settings] window.


Local Area Network (LAN) Settings
Automatic configuration
Automatic configuration may override manual settings. To ensure the use of manual settings, disable automatic configuration.
Automatically detect settings
Use automatic configuration script
Address
Proxy server
Use a proxy server for your LAN (These settings will not apply to dial-up or VPN connections).
Address:
Port:
Advanced...
Bypass proxy server for local addresses
OK
Cancel

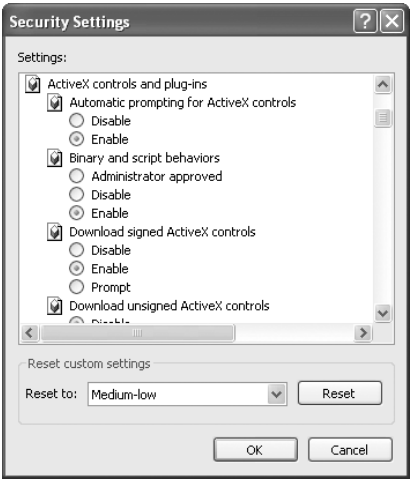
Deselect the check

3. If ActiveX controls and plug-ins of the Internet Explorer is disabled, follow the steps below to enable it

- Click [Trusted sites] under [Tool]-[Internet Options]-[Security]. Upon doing so, the [Sites…] button directly below becomes active. Click this button and deselect the check in the displayed window. Next, add the IP address of VN-X35U. If the setting is factory default, add the following web site to the zone.

  http://192.168.0.2

- Click [Trusted sites] under [Tool]-[Internet Options]-[Security]. Select the [Custom Level] button and open the [Security Settings] window. Set all items under [ActiveX controls and plug-ins] in the opened window to [Enable]. Enable also [Allow Script-initiated window without size or position constraints.] under [Miscellaneous].



4. If the pop-up block function of the Internet Explorer is enabled, follow the steps below to disable it

※Built-in Viewer cannot be used when the pop-up block function is enabled.

- Selecting [Tool]-[Pop-up Blocker]-[Turn Off Pop-up Blocker] permits all sites.
- To allow only specific sites such as VN-X35U, select [Tool]-[Pop-up Blocker]-[Turn On Pop-up Blocker], followed by selecting [Tool]-[Pop-up Blocker]-[Pop-up Blocker Settings] that becomes active to open the [Pop-up Blocker Settings] window. In the opened window, add the address of VN-X35U as a permitted web site address.

5. When plug-in tools such as the Yahoo or Google toolbar are included in the Internet Explorer, disable the pop-up block function of these plug-in tools as well

Memo:

- To use Built-in MPEG4 Viewer of VN-X35U, install “ffdshow” that is open source codec. You can download “ffdshow” from the Internet.

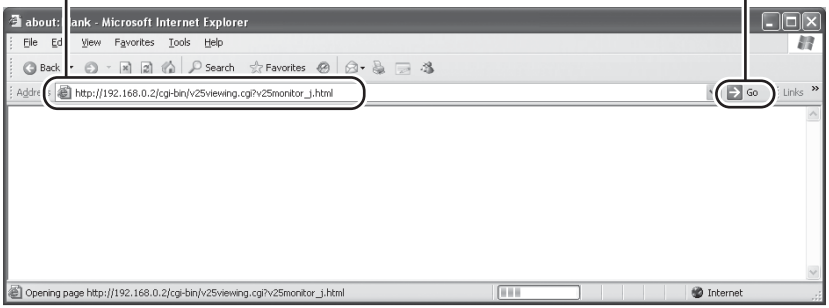
Operation of Built-in Viewer (continued)

Installing Built-in Viewer

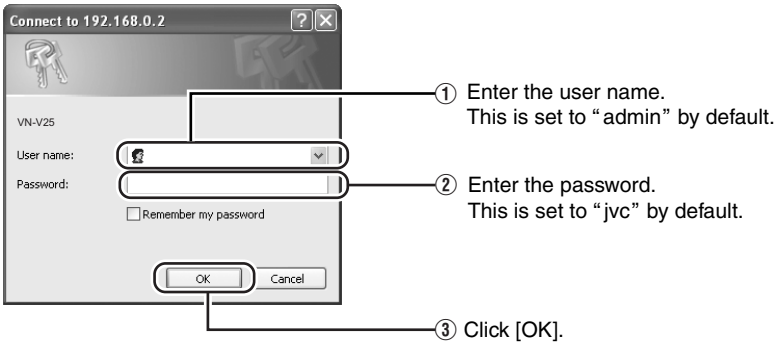
1. Enter IP address of camera in the address bar ofInternet Explorer

① Enter the following IP address into the address field.
http://192.168.0.2

② Click [Go]



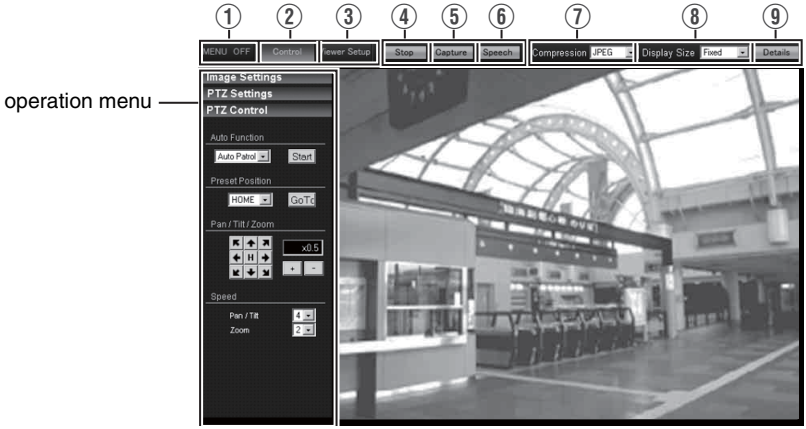
2. Enter the user name and password



3. The viewer is installed and launched

Operation of Built-in Viewer (continued)

Screen Configuration



① **MENU OFF/ MENU ON**	For showing/hiding the operation menu.
② **Control**	Switches to the Control menu. Click this button when you want to perform "Image Settings" or "PTZ Settings" or "PTZ Control"(☞ Page 92)
③ **Viewer Setup**	Switches to the Viewer Setup menu. Click this button when you want to configure the settings of "JPEG Viewer","MPEG4 Viewer","Audio Monitor" or "Operator Password".
④ **Stop**	Pauses/Resumes playback of images.
⑤ **Capture**	Captures the currently displayed image on the computer.The captured data is recorded as a JPEG file in the folder that is created under [My Document] of the computer. The default folder name is "VN-X35U". The file name is made up of the year, month, day, hour, minute, second, and millisecond. **Memo:** ● In the case of "Windows Vista", images are stored under [Documents]. ● The folder name can be changed. (☞ Page 99) **Note:** ● The time indicated is the computer's clock time,not the clock "Time" of VN-X35U. ● Motion images cannot be captured. ● MPEG4 images cannot be captured.

⑥ **Speech**	Starts sending audio sound to VN-X35U from the client PC. Only one stream of audio sound can be sent for one unit of VN-X35U You cannot send audio sound from a client PC when transmission of audio sound from a different client PC is in progress. ● The [Speech] button lights up in red during audio sound transmission. ● The [Speech] button does not turn red when audio transmission is not possible. **Memo:** ● Audio sound cannot be sent out simultaneously from the JPEG and MPEG4 Viewers.
⑦ **Compression**	Switches the stream to acquire. You can specify either JPEG or MPEG4
⑧ **Display Size**	For specifying the display size of the image area. Fixed : Display according to the window size of the browser. Variable : Display according to the specified frame size. **Memo:** ● The window size of the browser does not change when [Fixed] or [Variable] is selected.
⑨ **Detalis**	Starts up the page for configuring the various detailed settings.

Memo:

● The settings of Built-in Viewer are stored in the file named Cookie.

This setting screen is used to set Built-in Viewer as a software on the computer, and does not apply to settings of the VN-X35U unit.
When settings are changed, press the [OK] button to exit and restart the viewer.

Searching and deleting cookie files

●Open [Tool]−[Internet Options]−[Advanced] of the Internet Explorer, and press the [Settings] button under [Temporary Internet Files]. A new [Settings] will appear. Press the [View Files] button in this window. The [Temporary Internet Files] window opens up and a list of files will be displayed. The file named "cgi-bin" in this list is the Cookie for Built-in Viewer.

● Deleting this file deletes the view settings, and the viewer will be initialized during the next startup.

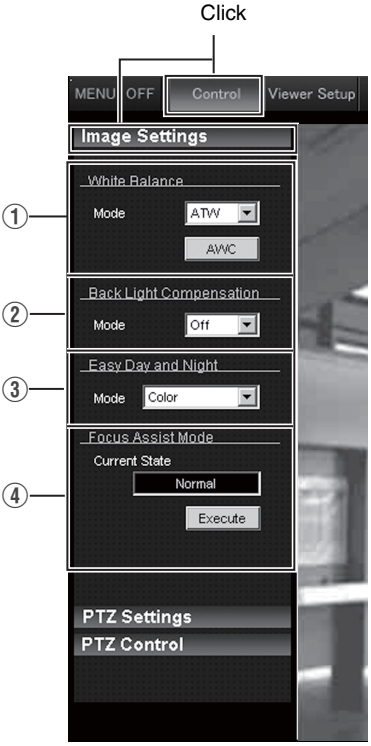
Operation of Built-in Viewer (continued)

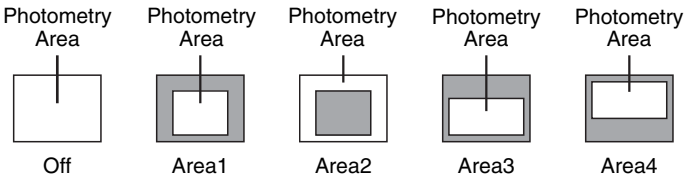
Image quality setting

Below are procedures for configuring the Image settings.

- When a different menu is currently being displayed, click [Control] to switch the viewer.
- Click each menu bar on the left of the screen to open the setting screen..

■ Image Settings



① **White Balance**	For selecting the white balance control feature.
Mode	ATW : Switches to the Auto-Tracking White Balance (automatic color temperature tracking) mode. Adjusts the white balance automatically according to the color temperature of the light. AWC : Switches to the Auto-White Balance Control mode. In the AWC mode, values entered for the [AWC R-GAIN]and [AWC B-GAIN] items under White Balance of the Camera page are applied to white balance.
[AWC] Button	Executes AWC (automatic white balance control). Execute by placing a white object around the center of the screen in a location with a lighting condition that is similar to the object to be shot. Click [AWC] button to switch to AWC mode.
② **Black Light Compensation**	For selecting the backlight compensation feature. Set this feature when there is a bright light source in the same direction as the object.Enables unwanted light sources to be excluded from the photometry area. Off : Disables backlight compensation. Area1 to 4 : For selecting a photometry area from the four available types. **[Set values: Off, Area1, Area2, Area3, Area4]**  **Memo:** ● The backlight compensation area is not linked to digital PTZ.
Mode	Off : Disables backlight compensation. Area1 to 4 : For selecting a photometry area from the four available types. **[Set values: Off, Area1, Area2, Area3, Area4]**
③ **Easy Day and Night**	For specifying Easy Day and Night.
Mode	Color : Set to the color mode at all times. White & Black : Set to the black-and-white mode at all times. Auto : Image color switches to black-and-white when the luminance level is low. **[Set values: Color , White & Black , Auto]**
④ **Focus Assist Mode**	If [Execute] button is clicked, [Current State] will change to [Focus Assist] and focus assist mode is enabled. If [Stop] button is clicked, [Current State] will change to [Normal] and focus assist mode is disabled. ● Focus assist mode will be disabled after 3 minutes if left unattended. ● Focus assist mode can be enabled using the button at the side of VN-X35U.

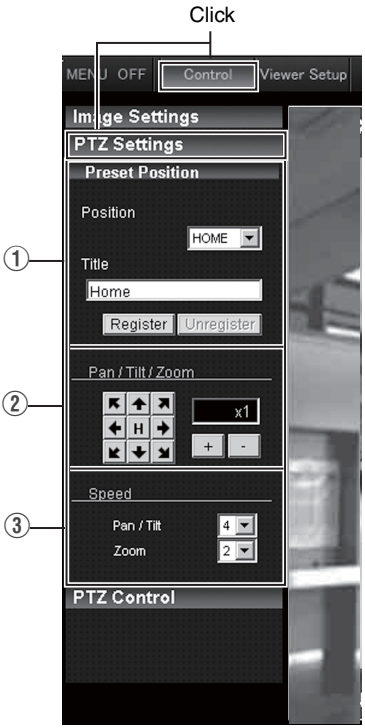
Operation of Built-in Viewer (continued)

PTZ setting

This page describes procedures for setting the preset positions.

- When a different viewer is currently being displayed, click [Control] to switch the viewer.
- Click the menu bar on the left side of the screen to open the setting screen.

■ PTZ Settings



① **Preset Position**		For setting the preset positions.
	Position	For selecting a "Position". **[Set values :HOME , 1 to 19]**
	Title	Displays the current title. Enter accordingly if you want to register or change a title. (You can enter up to 32 alphanumeric. "JPEG Viewer" displays up to only 16 alphanumeric.) Press [Reaiste] button to complete position registration. **Memo:** ● Click the [Unreaiste] button to delete the selected position information. However, [HOME] cannot be deleted. ● The display area of Home position is set to the full screen by default.
② **Pan /Tilt /Zoom**		■ Pan/Tilt operation Click the arrow buttons to move the display area in the direction indicated by the arrow. Release the button to stop moving the area. Click the "H" button to move to the home position. ■ Zoom operation Use this function to perform digital zoom on the display area. [+] : Zooms toward the tele end, and display of the object is enlarged. [-] : Zooms toward the wide end, and display of the object becomes smaller. ■ Ratio to Full Area Shows current ratio to full area. **Memo:** ● You can restrict the magnification of the object using the [+] button by altering the [Zoom Limit] settings.
③ **Speed**		For configuring the operation speed settings. Pan/Tilt : For configuring the operation speed settings of the Pan/Tilt control button. The larger the value, the higher the operation speed. **[Set values : 1 to 8]** Zoom : For configuring the operation speed settings of the Zoom control button. The larger the value, the higher the operation speed. **[Set values : 1 to 4]**

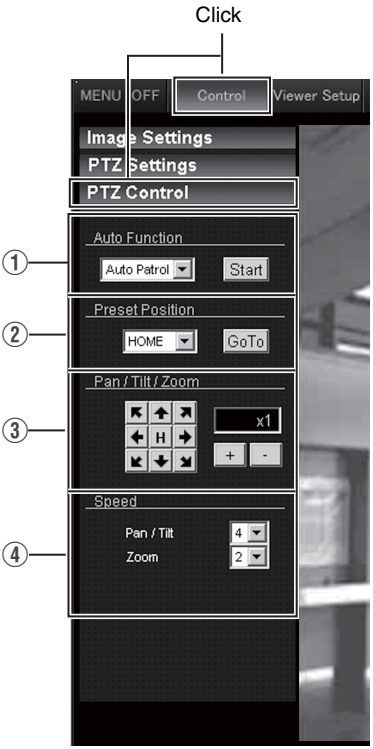
Operation of Built-in Viewer (continued)

PTZ Control

Use this item to operate the PTZ feature. Settings can be configured on the PTZ Settings .
(☞ Page 94)

- When a different menu is currently being displayed, click [Control] to switch the viewer.
- Click each menu bar on the left of the screen to open the setting screen.

■ PTZ Control



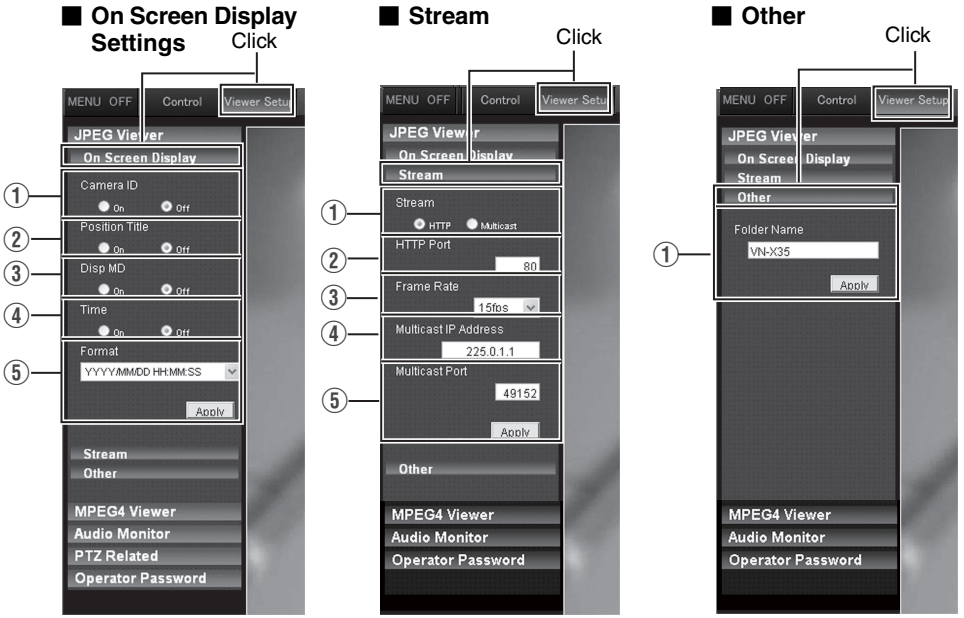
① **AUTO FUNCTION**	Start : Starts the Auto Patrol operation. Stop : Stops the Auto Patrol operation that is currently running.
② **Preset Position**	For selecting a Preset Position, or move to the selected Position if that Position has already been registered. **[Set values : HOME , 1 to 19]**
③ **Pan/Tilt/ Zoom**	■ Pan/Tilt operation Click the arrow buttons to move the display area in the direction indicated by the arrow. Release the button to stop moving the area. Click the [H] button to move to the home position. ■ Zoom operation Use this function to perform digital zoom on the display area. [+] : Zooms toward the tele end, and display of the object is enlarged. [-] : Zooms toward the wide end, and display of the object becomes smaller. ■ Ratio to Full Area Shows current ratio to full area. **Memo:** ● You can restrict the magnification of the object using the [+] button by altering the [Zoom Limit] settings.
④ **Speed**	For configuring the operation speed settings. Pan/Tilt : For configuring the operation speed settings of the "Pan/Tilt" control button. The larger the value, the higher the operation speed. **[Set values : 1 to 8]** Zoom : For configuring the operation speed settings of the "Zoom" control button. The larger the value, the higher the operation speed. **[Set values : 1 to 4]**

Operation of Built-in Viewer (continued)

JPEG Viewer Settings

Using the compressed JPEG format enables display of a series of still images as well as one-shot recording of still images.
When the JPEG Viewer is first installed, it is set to play back at 5 fps by default.

- When a different menu is currently being displayed, click [Viewer Setup] to switch the viewer.
- Click the menu bar on the left side of the screen to open the respective setting screens.



■ **On Screen Display Settings**		For setting display items on the viewer screen. For the JPEG Viewer, characters are displayed as overlay on the video image.
	① **Camera ID**	Select "On" to display [Camera ID]. [Camera ID] can be specified on the[Basic Settings2] or [Camera] page of VN-X35U.
	② **Position Title**	Selecting "On" displays the position title.
	③ **Disp MD**	When "On" is selected, the frame of the video image display area where motion is detected turns red.
	④ **Time**	Select "On" to display the time. This indicates the time that is stored in the JPEG data.
	⑤ **Format**	Select the format for displaying time. YYYY, MM, and DD denote year, month and day respectively, while HH, MM, and SS denote hour, minute and second respectively. mm is equivalent to 1/100 seconds.

■ **Stream Settings**		For specifying settings for receiving JPEG stream.
	① **Stream**	For selecting the protocol when the viewer acquires data from VN-X35U. When "HTTP" is selected, lost packets are recovered via resending. VN-X35U may be monitored using multiple viewers when "Multicast" is selected. When playing back via multicast., start multicast sending on the [Streaming] page. (☞ Page 68) **Note:** ● When Built-in Viewer is launched with "Multicast" specified, a Windows firewall warning may appear. In this case, select "unblock" and proceed. ● If "block" is selected, the Windows firewall will block the multicast stream and playback of multicast by the viewer will fail.
	② **HTTP Port**	You can change the HTTP port number. The default port number setting is 80. Specify the same value as the parameter that is set on the Protocol page of VN-X35U.
	③ **Frame Rate**	For selecting the acquisition frame rate of the viewer. Selecting a large frame rate will increase the processing load of the computer on which the viewer is running. **[Set values:15 , 10 , 7.5 , 6 , 5 , 3 , 2 , 1 , 1/2 , 1/3 , 1/5 , 1/10 , 1/15 , 1/20 , 1/30 , 1/60]** **Note:** ● Set to a rate such that the CPU burden of the computer does not exceed 80 %. When the CPU is overloaded, the computer may not function properly.
	④ **Multicast IP Address**	You can change the multicast IP address. The default address is 225.0.1.1.
	⑤ **Multicast Port**	You can change the multicast port number. The default port number setting is 49152. This is enabled when "Start" is selected for the [JPEG Control] item on the[Control] page. Specify the same value as the parameter that is set on the [Streaming] page of VN-X35U.
■ **Other**		
	① **Folder Name**	For specifying the name of the folder in which the captured files are stored. (Default name when viewer is installed: "VN-X35U"

Operation of Built-in Viewer (continued)

MPEG4 Viewer Settings

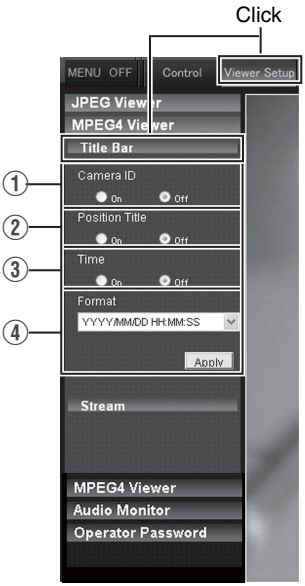
Using the compressed MPEG4 format enables display of MPEG4-encoded motion images.

- When a different menu is currently being displayed, click [Viewer Setup] to switch the viewer.
- Click the menu bar on the left side of the screen to open the respective setting screens.

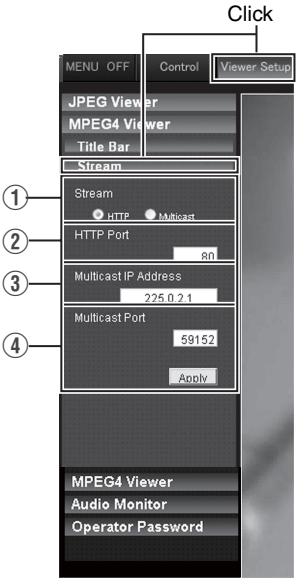
Memo:

- To make use of Built-in MPEG4 Viewer of VN-X35U, you will need to install the ffdshow open source codec. You can obtain ffdshow through the Internet.

■ Title Bar



■ Stream



■ **Title Bar**		For setting display items on the viewer screen. For the MPEG4 Viewer, characters are displayed in the title bar of the window.
	① **Camera ID**	Select "On" to display [Camera ID]. [Camera ID] can be specified on the [Basic Settings1] or [Camera] page of VN-X35U.
	② **Position Title**	Selecting "On" displays the Position Title.
	③ **Time**	Select "On" to display the time.
	④ **Format**	Select the format for displaying time. YYYY, MM, and DD denote year, month and day respectively, while HH, MM, and SS denote hour, minute and second respectively. mm is equivalent to 1/100 seconds.
■ **Stream Settings**		For specifying settings for receiving MPEG4 stream.
	① **Stream**	For selecting the protocol when the viewer acquires data from VN-X35U. When "HTTP" is selected, lost packets are recovered via resending. VN-X35U may be monitored using multiple viewers when "Multicast" is selected. When playing back via multicast., start multicast sending on the [Streaming] page of the VN-X35U unit. **Note:** ● When Built-in Viewer is launched with "Multicast" specified, a Windows firewall warning may appear. In this case, select "unblock" and proceed. ● If "block" is selected, the Windows firewall will block the multicast stream and playback of multicast by the viewer will fail.
	② **HTTP Port**	You can change the HTTP port number. The default port number setting is 80. Specify the same value as the parameter that is set on the [Protocol] page of VN-X35U.
	③ **Multicast IP Address**	You can change the multicast IP address. The default address is 225.0.2.1.
	④ **Multicast Port**	You can change the multicast port number. The default port number setting is 59152. This is enabled when [Start] is selected for the [MPEG4 Control] item on the [Streaming] page. Specify the same value as the parameter that is set on the [Streaming] page of VN-X35U.

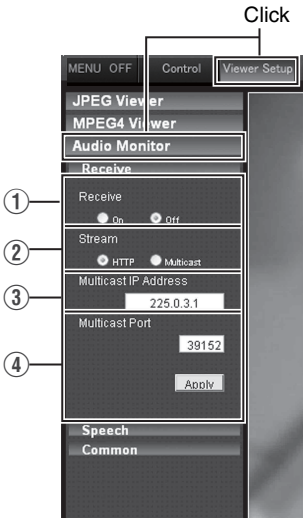
Operation of Built-in Viewer (continued)

Audio Monitor Settings

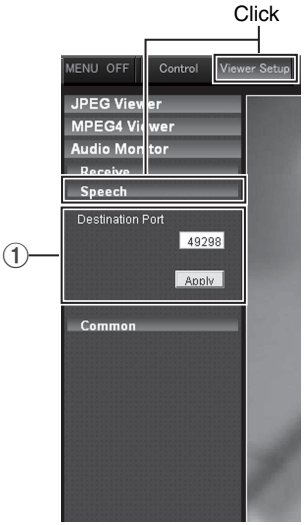
This page describes procedures for configuring the settings to send/receive audio sound using the JPEG and MPEG4 Viewers.

- When a different menu is currently being displayed, click [Viewer Setup] to switch the viewer.
- Click the menu bar on the left side of the screen to open the respective setting screens.

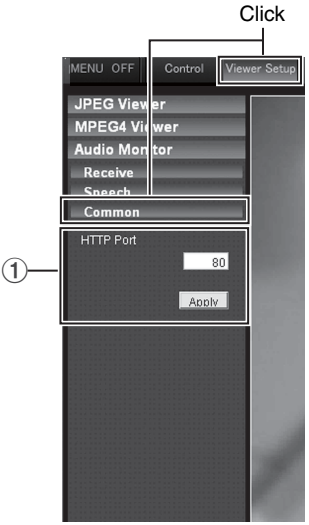
■ **Receive**



■ **Speech**



■ **Common**



■ **Receive**		For specifying settings related to receiving of audio sound sent from VN-X35U.
	① **Receive**	For specifying whether to receive audio sound. Select "On" to receive audio sound.
	② **Stream**	For selecting the stream format of the received audio sound. When "HTTP"is selected, lost packets are recovered via resending. When "Multicast"is selected, you can monitor the audio sound of VN-X35U using a multiple number of client PCs. During receiving via multicast., start multicast sending on the [Streaming] page. **Note:** ●When Built-in Viewer is launched with "Multicast" specified, a Windows firewall warning may appear. In this case, select "unblock" and proceed. ● If "block" is selected, the Windows firewall will block the multicast stream and playback of multicast by the viewer will fail.
	③ **Multicast IP Address**	You can change the multicast IP address. The default address is 225.0.3.1. Specify the same value as the parameter that is set on the [Streaming] page of VN-X35U.
	④ **Multicast Port**	You can change the multicast port number. The default port number setting is 39152. Specify the same value as the parameter that is set on the [Streaming] page of VN-X35U.
■ **Speech**		For specifying settings for sending audio sound to VN-X35U from the computer.
	① **Destination Port**	You can change the destination port for sending audio sound to VN-X35U from the computer. The default port number setting is 49298
■ **Common**		For specifying the HTTP port settings
	① **HTTP Port**	For changing the port number during access to VN-X35U from the client PC via HTTP. The default port number is 80. Specify the same value as the parameter that is set on the Protocol.

Operation of Built-in Viewer (continued)

Operator Password

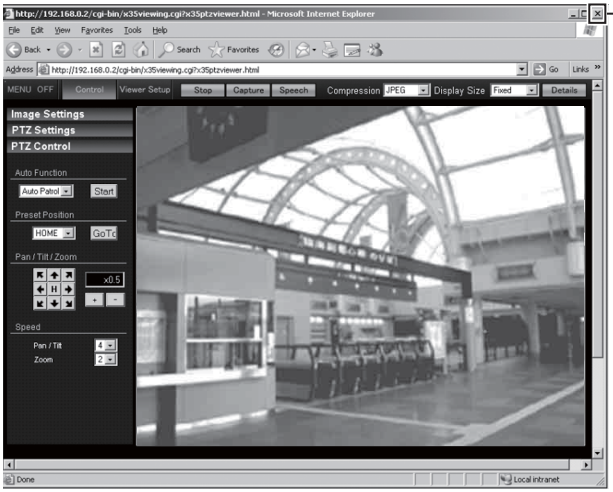
Follow the procedures below to configure the operator password required for sending/receiving audio sound or PTZ operation.

- When a different menu is currently being displayed, click [Viewer Setup] to switch the viewer.
- Click the menu bar on the left side of the screen to open the setting screen.

① **Operator Password**	Follow the procedures below to configure the operator password required for sending/receiving audio sound or PTZ operation.
Operator Password	For entering the [Operator Password].

Exiting the Viewer

To exit, press the [×] button at the top right of the window.



- During the next startup of Built-in Viewer, launch the Internet Explorer and enter the URL of Built-in Viewer in the address field.

  For example, if the IP address of VN-X35U is 192.168.0.2, enter as follows:

  http://192.168.0.2/cgi-bin/x35viewing.cgi?x35ptzviewer.html

Memo:

- To open the viewer again, enter the IP address in the address field of Internet Explorer .
  (☞ Page 88)

Troubleshooting

Symptom	Causes and Countermeasures	Reference Page
IP address of VN-X35U is unknown	● DHCP is “Enable” in default settings. IP address will be provided from DHCP server. ● If there is no DHCP server, VN-X35U will start using default IP address, 192.168.0.2, and default subnet mask, 255.255.255.0. ● Search tool in attached CD-ROM is available to find VN-X35U from a PC in the same LAN.	☞ Page 33
The web page of VN-X35U cannot be displayed	Check the Internet Explorer settings. When a proxy server is in use, configure the proxy server settings of the Internet Explorer accordingly.	☞ Page 33
Built-in Viewer cannot be installed	Check the Internet Explorer settings. Built-in Viewer consists of a software component called ActiveX. The ActiveX is usually installed when Built-in Viewer is used for the first time. However, installation may be rejected depending on the Anti-virus software settings. In this case, change the settings of the Anti-virus software before installing Built-in Viewer.	☞ Page 86
Authentication by Verisign appears during installation of Built-in Viewer	Verisign’s electronic signature is stored in Built-in Viewer. For computers with a network environment that is connected to the Internet, the authenticity of the viewer can be verified via authentication by Verisign.	—
A warning message appears upon starting up Built-in Viewer	Built-in Viewer consists of a software component called ActiveX. The ActiveX is usually installed when Built-in Viewer is used for the first time. However, installation may be rejected depending on the Anti-virus software settings. In this case, change the settings of the Anti-virus software before installing Built-in Viewer.	—
TCP images cannot be played back	The maximum number of images that can be sent by VN-X35U via TCP is 20, and up to 20 Built-in Viewers can be connected to each VN-X35U unit. Make use of multicast for monitoring when the number of areas exceeds the above number. VN-X35U allows multicast transmission of JPEG and MPEG4 one stream at a time.	☞ Page 24

Symptom	Causes and Countermeasures	Reference Page
Multicast images cannot be played back	● Start multicast transmission manually from the [Streaming] page of VN-X35U. ● In the case of multicast reception at Built-in Viewer, check that the multicast address and port number of Built-in Viewer settings coincide with those on the [Streaming] page of VN-X35U. Make use of a network that supports IGMPv2 for multicast transmission. ● Multicast may be blocked by the WindowsXP firewall. When this occurs, perform the following to allow it to pass through. Double-click [Windows Firewall] under [Start]–[Control Panel], click the [Add Port…] button under the Exception tab, and register the port number to be allowed through the firewall in the Port Number field. Enter an arbitrary character string in the name field.	☞ Page 68 ☞ Page 98 ☞ Page 86
The frame rate of the displayed image is low	● Check Built-in Viewer settings when a Built-in Viewer is in use. ● Frame rate will be constrained when the network bandwidth is narrow.	☞ Page 90 ☞ Page 99
A white zone appears in Built-in Viewer	● For some computers, a part of the Internet Explorer graphics may not appear and is left white when the following setting is performed on the Internet Explorer. If [Right-click on the Desktop screen]–[Properties]–[Settings]–[Advanced]–[Advanced]–[DPI setting] is set to “Large size” or “Custom size”, select “Normal size” to resume normal drawing.	—
Unable to receive alarm notification using the computer via TCP/UDP	● Data may be blocked by the WindowsXP firewall. When this occurs, perform the following to allow it to pass through. Double-click [Windows Firewall] under [Start]–[Control Panel], click the [Add Port…] button under the Exception tab, and register the port number to be allowed through the firewall in the Port Number field. Enter an arbitrary character string in the name field.	—
Images are not distributed to the network	● Check whether the switch at the side of VN-X35U is set to or . If either of the above is selected, change the switch setting to . After changing the switch settings, press the [RESET] button to reboot.	☞ Page 11

Troubleshooting (continued)

Symptom	Causes and Countermeasures	Reference Page
The MPEG4 Viewer screen appears in black	When DirectX 9.x or Windows Media Player 9.x is installed on the computer, the video image screen appears in black. [Countermeasure] To make use of Built-in MPEG4 Viewer of VN-X35U, install “ffdshow” that is open source codec. You can download “ffdshow” from the Internet.	—
No MONITOR OUT image output	● Set the switch to or , and press the Reset button. ● When using the output, set the privacy mask to “Off”.	☞ Page 11 ☞ Page 61
Zonal noise occurs at the bottom of the MONITOR OUT image	When using the output, set the privacy mask to “Off”.	☞ Page 61
Images from the network are distorted	Set the switch to , and press the Reset button.	☞ Page 19
No sound is heard from the external microphone	Check whether the MIC terminal is connected to the R ch.	☞ Page 19
The lens is out of focus	Check whether a CS mount lens is used.	☞ Page 16

Specifications

Camera Unit

Pick-up element : 1/3-inch progressive scan CCD

Effective pixels : Approx. 1,250,000 pixels 1296(H) × 966 (V)

Lens Mount : CS mount

[Monitor Output]

Composite video x 1 (75 Ω, 1 Vp-p)

Minimum object illumination (Shutter 1/30):

: 0.66 lx (50 %, F1.0, AGC Super)

: 0.33 lx (25 %, F1.0, AGC Super)

: 0.48 lx (50 %, F1.0, Easy Day and Night ON)

: 0.24 lx (25 %, F1.0, Easy Day and Night ON)

[Audio Input]

mini jack (R3.5 stereo R ch)
Plug-in power type microphone can be connected

Supply voltage : DC 2.7 V (typ.)

Input impedance : 2.2 kΩ (typ.)

[Audio Output]

Line out × 1, (200 Ω Maximum 2.2 Vp-p)

Mini jack (ø3.5 Stereo Lch)

[Network Output]

Image compression format

: JPEG, MPEG4

Frame size : 1280×960
640×480
320×240

Horizontal resolution

: 700 TV lines
(with recommended lens)

Recommended lens

: Please refer to our catalog

Audio compression format

: μ-law (64 kbps)
AD/DA 16 bits
Fs = 8 kHz, mono

Network interface

: RJ-45
100BASE-TX/10BASE-T/
FULL/HALF/Auto negotiation supported

LAN Specifications

Compliant with IEEE802.3, IEEE802.3u and IEEE802.3af

Communication protocol

: TCP/IP, UDP, HTTP, FTP, ICMP, ARP, RTP, DHCP, SNTP, SMTP, IGMP

General

Alarm input : No-voltage a contact input, NPN open collector input, low level, latch/momentary (500 ms and above) (Circuit current during low level: 1 mA; Applied voltage during high level: DC 3.3 V)

Alarm output : NPN open collector output (Allowable applied voltage: DC 12 V; Allowable inflow current: 50 mA)

Internal memory : 8 MB

Supply voltage : AC 24 V 50 Hz/60 Hz or PoE (DC -48 V)

Current consumption

: AC 24 V 0.35 A
PoE 135 mA (6.5 W)

Ambient temperature

: -10 ° to 50 ° (operation)
0 ° to 40 ° (Recommended)

Ambient humidity

: 20 % RH to 85 % RH (without condensation)

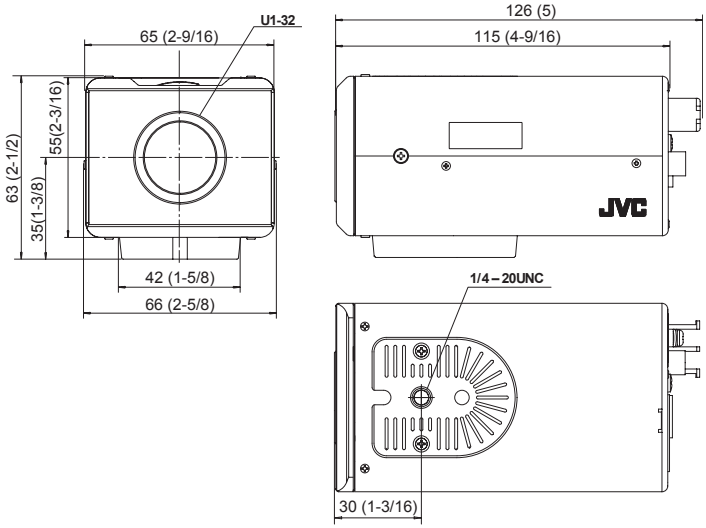
Mass : 510 g (1.13 lbs)

Accessories/Attachments

: READ ME FIRST 1
CD-ROM 1
Warranty Card (For USA)..... 1
Service Information Card (For USA) 1

Specifications (continued)

Dimension [Unit: mm (inch)]



※ Specifications and appearance of this product are subject to changes for improvement without prior notice.

VN-X35U MEGAPIXEL IP CAMERA

JVC

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